DOCUMENT RESUME

ED 130 114 CE 008 636

TITLE Occupational Orientation: Health Occupations. Experimental Curriculum Materials.
INSTITUTION Illinois State Office of Education, Springfield.
PUB DATE [75]
NOTE 228p.; For related documents see CE 008 635-639

EDRS PRICE MF-$0.83 HC-$12.71 Plus Postage.
DESCRIPTORS Activity Learning; Attitude Tests; *Career Exploration; Criterion Referenced Tests; Curriculum; *Health Occupations; Health Services; Instructional Materials; *Learning Activities; Lesson Plans; Medical Services; *Occupational Clusters; Occupational Guidance; Paramedical Occupations; Performance Based Education; Secondary Education
IDENTIFIERS Illinois

ABSTRACT

These experimental curriculum materials for one of five clusters developed for the occupational program in Illinois include a series of learning activity packages (LAPs) designed to acquaint the student with the wide range of occupational choices available in the health occupations field. The 28 LAPs, each with a different occupation focus, are grouped under seven categories: (1) Health Occupations (General), (2) Medical, Dental and Nursing Occupations, (3) Related Health Specialties, (4) Physical, Mental, and Social Rehabilitation Occupations, (5) Clinical Laboratory and Related Technical Occupations, (6) Environmental and Public Health Occupations, and (7) Administrative, Business, and Clerical Occupations. Each LAP identifies the category, the focus, the activity, and the objective. It lists the equipment, supplies, and forms needed, states the rationale, and describes the suggested procedure and alternate activities. The activities are designed to give students the opportunity to research, observe, and gain hands-on experience in representative jobs within the career field. This document contains the Student Awareness/Attitude Inventory, and guidelines for developing pre-post assessment tests. Student forms (Resource Person Information Sheet, Field Trip Observation Form, Interview Questions, Observation/Interview Form) and lists of 34 references and 81 addresses for obtaining resources are appended. (HD)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED130114

OCCUPATIONAL ORIENTATION

HEALTH OCCUPATIONS

Illinois Office of Education
Joseph M. Cronin, Superintendent
100 North First Street
Springfield, Illinois 62777

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Development of Pilot Model: Southern Illinois University (Carbondale)

Pilot Testing: Springfield Public Schools, District No. 186

Revision and Production: National Evaluation Systems, Inc., Amherst, Massachusetts

Project Director, Peter Schriber
Project Liaison, Richard Allan
Editor, John Ziegenhagen

CE 008 636

HEALTH OCCUPATIONS

Table of Contents

Page

Introduction i

Health Occupations (General)

LAP 1: Understanding of Requirements and Categories 1
LAP 2: Life Worth/Job Value 11
LAP 3: Student Likes and Dislikes 14
LAP 4: Health Needs/Life-Time Span 19
LAP 5: Introduction to Medical Terminology 27
LAP 6: Occupational Titles 31
LAP 7: Overview of Interests/Qualifications 39
LAP 8: Career Information Gathering 49
LAP 9: Purpose and Functions of the Health Industry 55
LAP 10: Hospital Careers 66
LAP 11: Research Method 72
LAP 12: Operation MEDIC (Medical Educational Data in Careers) 77

Medical, Dental and Nursing Occupations

LAP 13: Medical Doctor 91
LAP 14: Dental Careers 97
LAP 15: Nursing 104
LAP 16: Aide and Assistant Level Careers 111

Page

Related Health Specialties

LAP 17: Speech Pathologist 124

LAP 18: Registered Emergency Medical Technician (Paramedic) 126

LAP 19: Pharmacy 129

Physical, Mental, and Social Rehabilitation Occupations

LAP 20: The Field of Physical Rehabilitation 131

LAP 21: Mental Health Worker 137

LAP 22: Mental Health Technician 141

Clinical Laboratory and Related Technical Occupations

LAP 23: The Field of Medical Technology 147

LAP 24: Radiologic Technologist 156

LAP 25: Dental Technology 168

Environmental and Public Health Occupations

LAP 26: The Field of Public Health 172

Administrative, Business, and Clerical Occupations

LAP 27: Administrative Services 184

LAP 28: Medical Records Occupations 193

Student Forms

Resource Person Information Sheet 199
Field Trip Observation Form 201
Interview Questions 204
Observation/Interview Form 206

References

Resources

INTRODUCTION

The Health Occupations cluster is one of five clusters developed for the occupational orientation program in Illinois. The other four clusters are: Personal and Public Service Occupations; Business, Marketing, and Management Occupations; Industrial Oriented Occupations; and Applied Biological and Agricultural Occupations.

Each cluster consists of a series of learning activity packages (LAPs), teacher references, and career resources. The purpose of the LAPs is to acquaint students with the wide range of occupational choices available within each career cluster field. By participating in the activities, students are given the opportunity to research, observe, and gain hands-on experience in representative jobs within the career field.

Accompanying these cluster materials is the Teacher's Guide to Occupational Oreintation. The guide provides an overview of the occupational orientation program in Illinois, suggestions to teachers for implementing a variety of instructional strategies contained in the cluster (field trips, simulations, use of resource persons, and in-class projects), and the Career Exploration Package on interviewing techniques which lays a basic foundation for the learning activity packages within each cluster. It is strongly recommended that teachers use the Teacher's Guide in conjunction with the teaching of the cluster.

Also included in the Teacher's Guide, and duplicated here, are 1) guidelines for developing pre-post assessment tests and 2) a Student Awareness/Attitude Inventory that can be administered at the beginning of the cluster course.

Guidelines for Developing Pre-Post Assessment Tests

Measuring student knowledge before, during, and after teaching the cluster materials is an important ingredient to the success of the occupational orientation program. Testing allows both the teacher and the student to know what material is going to be covered in one or more LAPs and also to know what material has and has not been learned upon the completion of the activity.

The learning activity packages contained in the cluster materials lend themselves particularly well to this kind of student evaluation. Since an integral part of each LAP is the LAP objective, tests can be developed to measure on a pre-post basis how well each student has mastered the skill or knowledge taught during the activity.

Tests that evaluate students in this way are called criterion-referenced tests. These tests are simply a measure of what the student knows or can do, given the conditions, performance, and standards stated in the objective. Examples of situations in which pretests and posttests could be used effectively in the teaching of this cluster are:

- before and after a field trip to a hospital
- before and after class presentations on the field of public health
- before and after the teaching of a series of LAPs on medical, dental, and nursing occupations
- before and after the teaching of the entire cluster on Health Occupations

In each of these situations a pretest serves several useful purposes. Students are given an overview of the kinds of things that will be covered during the lesson or course and what they will be expected to know upon its conclusion. Teachers can discover, by examining the results of the pretests, areas in which students are strongest, as well as areas in which intensive instruction will be required.

By comparing the pretest results with those of the posttest, each student and the teacher learn which skills and knowledge have been mastered or not mastered for a single LAP, a series of related LAPs, or the entire course. Through the evaluation of pre- and posttest results, remediation activities can be planned, courses can be revised, and successful teaching strategies can be identified.

The procedures listed below are given here as an aid in developing tests in the Health Occupations cluster. The example given here deals with a single learning activity package; however, these same steps can be used for pre- and posttesting a series of related LAPs or for pre- and posttesting the entire cluster.

The teacher should also consult the series of Pre-Service Occupational Program (POP) Kits available from the Division of Adult, Vocational and Technical Education office in Springfield. Of particular importance are: Kit 3.1, Student Performance Objectives; Kit 3.3, Writing Sets of Objectives; Kit 5.1, Test Item Writing; and Kit 5.2, Student Performance Evaluation.

Develop one or more performance objectives based on a LAP objective. Every learning activity package in the cluster is preceded by a general learning objective, i.e., a statement of what the student should be able to do upon completion of the activity. The specific activity described in LAP 20, for example, is a presentation by a resource person in the field of physical rehabilitation. The objective for LAP 20 is: "At the conclusion of this lesson, the student will be able to describe at least two places where a physical therapist works, and the educational requirements, employment opportunities, and salary range for careers in physical rehabilitation."

This general learning objective can be broken down into several more specific performance objectives: 1) "Given a list of five job locations, the student will be able to select from the list two job locations of a physical therapist," 2) "Given a scale of salary ranges, the student will be able to identify the salary scale for a physical therapist," 3) "Given four descriptions of employment opportunities, the student will be able to select the description which best fits that of a physical therapist," 4) "Given a list of four educational requirements for jobs, the student will be able to select the educational requirements of a physical therapist."

Notice that for each of the performance objectives, three components were presented: the conditions ("given a list" or "given a scale"), the outcome required of the student ("will be able to select from the list two job locations of a physical therapist") and the criteria of performance required (selecting two locations from a list of five). A well-written performance objective always contains these three components stated in concrete, measurable terms.

Rank the performance objectives by importance. Before writing test items, the relative importance of each of the performance objectives should be decided. For a single learning activity package this decision is usually not too difficult to make. In LAP 20, for example, you may decide that the performance objective dealing with employment opportunities is most important, while the other three objectives are of lesser importance. When you are trying to decide the importance of 20 or 30 performance objectives for a series of 10 learning activity packages, this task may be more difficult. However, the time will be well spent since such pre-instruction decisions on a series of LAPs will assist planning for teaching skills and knowledge most important for students to learn.

Decide how much testing time is available or desirable. Since the amount of testing time determines, in large part, the length of the test, you must decide how much time is available or desirable for testing. Testing time could range from a short 5 to 10-minute period for a pretest before a speech pathologist comes to speak to the class, to a 30- or 40-minute period for a posttest following instruction on the three LAPs in Physical, Mental and Social Rehabilitation. When you have decided the amount of testing time, you should be able to estimate the number of test items to be written.

Develop one or more test items to measure each performance objective. The first consideration is the number of test items to be designed for each objective. Having decided, for example, that the employment opportunities for physical therapists are the most important aspect of LAP 20, you will probably want to write a large proportion of the test items to measure that performance objective. A second consideration is the type or format of test item to select.

For ease of administration and evaluation of results, it is advised that group-administerable, multiple-choice items be used. Written responses to questions or individually administered items are much more difficult to score and evaluate and require an excessive amount of testing time.

Administering the Student Awareness/Attitude Inventory

The student awareness/attitude inventory on the following pages should be given before instruction begins on any of the learning activity packages in the cluster. Two purposes are served by the inventory: 1) it can be used by the teacher to generate a general class discussion about careers and to establish a positive climate for occupational exploration in the Health Occupations field, and 2) it can serve as the basis for a personal career discussion between the student and his or her guidance counselor. Items 1-60 are specifically designed for general class discussion purposes and Items 61-102 are designed for career guidance discussions.

Through the combination of this inventory, other guidance activities, the cluster's learning activity packages, and the Career Exploration Package (see Teacher's Guide), it is hoped that the student will take responsibility for establishing his or her own career goals. The discussions which result from the administration of the inventory provide a useful starting point for identifying both awareness and attitudes in the occupational orientation program.

STUDENT AWARENESS/ATTITUDE INVENTORY

Name: ________________________________

Directions: Listed below are a number of statements about work and choosing an occupation. Read each statement and decide whether you agree or disagree with it. Your answer should be as close as possible to what your true opinion is right now. There are no right or wrong answers. If you STRONGLY AGREE with the statement, circle SA; if you AGREE with the statement, circle A; if you are UNDECIDED, circle U; if you DISAGREE with the statement, circle D; and if you STRONGLY DISAGREE circle SD.

1. You have to know what you do well, and what you do not do well before you can choose an occupation. SA A U D SD
2. Ask others about their occupations, but make your own choice. SA A U D SD
3. It's unwise to choose an occupation until you have given it a lot of thought. SA A U D SD
4. Once you make an occupational choice, you can't make another one. SA A U D SD
5. In making an occupational choice, you need to know what kind of person you are. SA A U D SD
6. A person can do anything he or she wants as long as he or she tries hard. SA A U D SD
7. Your occupation is important because it determines how much you can earn. SA A U D SD
8. In choosing an occupation, it is more important to know what you do well than to know what you like to do. SA A U D SD
9. Plans which are indefinite now will become much clearer in the future. SA A U D SD
10. Your parents probably know better than anybody which occupation you should enter. SA A U D SD
11. Work is worthwhile mainly because it lets you buy the things you want. SA A U D SD
12. Work is drudgery. SA A U D SD
13. A person should not even try to decide upon an occupation because the future is so uncertain. SA A U D SD
14. It's probably just as easy to be successful in one occupation as it is in another. SA A U D SD
15. By the time you are 15 years old, you should have your mind pretty well made up about the occupation you intend to enter. SA A U D SD

16. There are so many things to consider in choosing an occupation, it is hard to make a decision. SA A U D SD

17. Sometimes you can't get into the occupation you want to enter. SA A U D SD

18. You can't go very far wrong by following your parent's advise about which occupation to enter. SA A U D SD

19. Working in an occupation is a lot like going to school. SA A U D SD

20. The best thing to do is to try out several occupations and then choose the one you like best. SA A U D SD

21. There is only one occupation for each individual. SA A U D SD

22. The most important consideration in choosing an occupation is whether or not you like it. SA A U D SD

23. Your interest in an occupation is not as important as whether you can do the work. SA A U D SD

24. You get into an occupation mostly by chance. SA A U D SD

25. It's who you know, not what you know, that's important in an occupation. SA A U D SD

26. You should choose an occupation which gives you a chance to help others. SA A U D SD

27. You should choose an occupation, then plan how to enter it. SA A U D SD

28. You should choose an occupation in which you can someday become famous. SA A U D SD

29. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions. SA A U D SD

30. Choose an occupation which allows you to do what you believe in. SA A U D SD

31. The most important part of work is the pleasure which comes from doing it. SA A U D SD

32. It doesn't matter which occupation you choose as long as it pays well. SA A U D SD

33. As far as choosing an occupation is concerned, something will come along sooner or later. SA A U D SD

34. I don't worry about choosing an occupation because I don't have anything to say about it anyway. SA A U D SD

35. The best occupation is one which is interesting. SA A U D SD

36. I really can't find any occupation that has much appeal to me. SA A U D SD

37. I have little or no idea of what working will be like. SA A U D SD

38. When I am trying to study, I often find myself daydreaming about what it will be like when I start working. SA A U D SD

39. If I go into the military, I think I'll wait to choose an occupation until I'm out. SA A U D SD

40. When it comes to choosing an occupation, I'll make up my own mind. SA A U D SD

41. I want to really accomplish something in my work—to make a great discovery or earn lots of money or help a great number of people. SA A U D SD

42. As long as I can remember, I've known what job I wanted to do. SA A U D SD

43. I can't understand how some people can be so set about what job they want to do. SA A U D SD

44. My occupation will have to be one which has short hours and nice working conditions. SA A U D SD

45. The occupation I choose has to give me plenty of freedom to do what I want. SA A U D SD

46. I want an occupation which pays a lot of money. SA A U D SD

47. I often wonder how successful I'll be in my occupation. SA A U D SD

48. I know which occupation I want to enter, but I have difficulty in preparing myself for it. SA A U D SD

49. I know very little about the requirements of occupations. SA A U D SD

50. I want to continue my schooling, but I don't know what courses to take or which occupations to choose. SA A U D SD

51. I spent a lot of time wishing I could do work that I know I cannot ever possibly do. SA A U D SD

52. I'm not going to worry about choosing an occupation until I'm out of school. SA A U D SD

53. If I can just help others in my work, I'll be happy. SA A U D SD

54. I guess everybody has to go to work sooner or later, but I don't look forward to it. SA A U D SD

55. I often daydream about what I want to be, but I really don't have an occupational choice. SA A U D SD

56. The greatest appeal of an occupation to me is the opportunity it provides for getting ahead. SA A U D SD

57. Everyone seems to tell me something different—until now I don't know which occupation to choose. SA A U D SD

58. I have a pretty good idea of the occupation I want to enter, but I don't know how to go about it. SA A U D SD

59. I plan to follow the occupation my parents suggest. SA A U D SD

60. I seldom think about the occupation I want to enter. SA A U D SD

61. A college degree is necessary for the kind of work I want to do. SA A U D SD

62. My father wants me to go to college. SA A U D SD

63. My mother wants me to go to college. SA A U D SD

64. I would be able to earn more money as a college graduate. SA A U D SD

65. I want to learn more about the careers I might enter. SA A U D SD

66. Marriage will help advance my career. SA A U D SD

67. I enjoy learning. SA A U D SD

68. My teachers think that I should go to college. SA A U D SD

69. I feel athletics should be an important part of my education. SA A U D SD

70. I'm influenced by many of my friends who are going to college. SA A U D SD

71. Social activities are very important to my career goals. SA A U D SD

72. I want to make good personal contacts for business or an occupation. SA A U D SD

73. A college education would not help me to do the things I am most interested in. SA A U D SD

74. I want to get a job and start earning a living as soon as possible. SA A U D SD

75. I need to start earning a living in order to support myself immediately. SA A U D SD

76. Continuing my formal education after high school would cost more than my parents could afford. SA A U D SD

77. Continuing my formal education after high school would cost more than my parents are willing to pay. SA A U D SD

78. My high school grades are too low to continue my education after high school. SA A U D SD

79. I don't like to study. SA A U D SD

80. I don't think I have the ability to continue my education after high school. SA A U D SD

81. It would cost more than it is worth to me to continue my education after high school. SA A U D SD

82. Earning a good income is important to me. SA A U D SD

83. Having job security and permanence is important to me. SA A U D SD

84. The work that I do should be important. SA A U D SD

85. I want the freedom to make my own decisions in my job. SA A U D SD

86. In my job I should have the opportunity for promotion and advancement. SA A U D SD

87. Meeting and working with sociable, friendly people is important to me. SA A U D SD

88. If I could get better pay at another place, I would change jobs. SA A U D SD

89. If the work was not interesting enough, I would change jobs. SA A U D SD

90. If I could do more important work elsewhere, I would change jobs. SA A U D SD

91. If I had a poor supervisor, I would change jobs. SA A U D SD

92. If I didn't like my co-workers, I would change jobs. SA A U D SD

93. If I did not receive expected promotions or salary increases, I would change jobs. SA A U D SD

Directions: Read each question and circle the letter that answers the question for you.

94. Do you think you will quit high school before you graduate?

A. I will definitely leave.
B. I am likely to leave.
C. I don't know.
D. I am likely to stay.
E. I will definitely stay.

95. After you graduate from high school, what do you plan to do?

A. I will get a job.
B. I will go to vocational, technical, or business school.
C. I will go to junior college.
D. I will go to college.
E. I don't know.

96. If you go to college when do you plan to start?

A. right after high school.
B. after completing military service.
C. after I have worked for a few years.
D. my plans are not definite.
E. I definitely do not plan to attend college.

97. How much education do your parents or guardians want you to have?

A. They don't care whether I stay in school.
B. high school only
C. vocational school, business school, or junior college
D. college degree
E. I don't know.

98. How much education are most of your friends planning to obtain?

A. They are planning to quit high school.
B. They are planning to complete only high school.
C. They are planning to obtain vocational school, business school, or junior college training.
D. They are planning to obtain four-year college training.
E. I don't know.

99. How many different occupations have you seriously considered entering?

A. none
B. one
C. two
D. three
E. four or more

100. How definite is your present choice of an occupation?

A. I have made a definite choice.
B. I have made a likely choice.
C. I am undecided about my future occupation.

101. What grade were you in when you decided upon your present choice of an occupation?

A. I have not decided upon an occupation.
B. sixth grade or earlier
C. seventh or eighth grade
D. ninth grade
E. tenth grade

102. What three jobs would you like to have someday? Write your first, second, and third choice below.

____

____

____

Occupational Orientation
Health Occupations

LEARNING ACTIVITY PACKAGE 1

Category: Health Occupations (General)

Focus: Understanding of Requirements and Categories

Activity: Student Exercise

Objective: At the conclusion of this lesson, the student will be able to demonstrate, through classroom discussion, knowledge of the requirements for the health cluster and how each of the categories and careers within the cluster is unique.

EQUIPMENT, SUPPLIES, AND FORMS

1. Requirements for cluster and student log
2. Student diary
3. Large envelope or file with student's name
4. Occupations Related by Health Categories (see sample enclosed in this learning package)
5. Health Occupations (see sample enclosed in this learning package)
6. Teacher's Key (see sample enclosed in this learning package)
7. The Health Cluster (see sample enclosed in this learning package)
8. Visual #1 (see sample enclosed in this learning package)
9. Medical Dictionaries
10. Occupational Outlook Handbook

RATIONALE

The purpose of this activity is to provide students with the cluster requirements and a list of health occupations by categories.

SUGGESTED PROCEDURES

Explain the cluster requirements to the students. Describe the use of:

1. Envelope or file. These are for use by the student to keep together the completed lessons and forms.
2. Student log. Each day the student is responsible for listing the day's activity in the log in order to keep track of missing lessons and to keep lessons in order.
3. Student diary. The student is to keep a record of thoughts, ideas, observations, feelings, and experiences as he/she procedes through the cluster. The student should record these in a separate notebook or tablet.

Explain the necessity of placing and relating health careers so that they can be studied in some organized way. It is important for the students to understand that this is an educational model for presenting health careers and does not represent the way health careers are accredited, etc.

See Visual #1 and the suggested presentation, The Health Cluster, for further information and procedures for presenting the categories.

Divide students into groups of three and have them complete the Occupations Related by Health Categories form, following the directions on the form.

The list of health occupations is long and job titles are somewhat confusing. Many titles contain the words technologist, therapist, technician, assistant, or aide. Generally, although there are a number of exceptions, this is what those terms imply about the education required for entry into a given health field:

> A technologist or therapist requires educational preparation at the bachelor's degree or higher.
>
> A technician or assistant requires educational preparation at the associate degree level (two years) or one year of college or hospital training.
>
> An aide requires on-the-job training or short-term specialized training.

Other terms which may need to be explained to the students are:

> Licensure is the process by which a governmental agency grants permission to a person who meets predetermined qualifications to engage in a given occupation and/or use a particular title. Also, licensure indicates permission for institutions to perform specified functions.
>
> Allied health refers to all those personnel who support the work of physicians, dentists, and registered nurses in the area of patient care, public health, environmental health, and health research. In allied health, there are professional, technical, and supportive careers.
>
> Certification is the process by which a nongovernmental agency or association grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association.

This lesson can be presented in two days or longer. Initially outline the requirements for the course. Have the students write a one-sentence definition of the work done by each worker listed on the student handout, Occupations Related by Health Categories.

Then, explain the categories, use the visuals, and, together with the class, place the occupations under each category. Have the class give a reason for each occupation being placed under the category before placing it on the student handout.

THE HEALTH CLUSTER

The health cluster is a difficult cluster because there are so many different types of jobs with very special and unique skills, training, and/or education. There are jobs which fall into the health cluster which also relate to other clusters. One good example of this is the office worker who must have a knowledge of both business and health.

Consideration has been given to the health field because of the employment needs and the rapid development of programs in this area in recent years. The health cluster careers hold out promise for a good future, a sense of self-worth, job flexibility, and continued on-the-job training. No matter what your special talent, skill, or interest, there are jobs for a person such as you.

There are seven categories in the health cluster. A job in any one category can be closely related to a job in one of the other categories, or might even qualify to be placed in two categories. A pathologist, for instance, is a medical doctor and would be found in Medical, Dental, and Nursing and the Clinical Laboratory categories. (See Visual #1).

You will learn about the health cluster by being introduced to the categories one at a time. After understanding the first category, you will add a second, then a third, and so on. Visual #1, and the student handout, Occupations Related by Health Categories, give you an idea of how the careers in these categories are interrelated.

Some of you would not like to do patient care, study science, or work in a hospital and around sick people. There are still many careers in the health cluster which could be interesting to you. Whether medical technician or business related work such as hospital cashier, there is a career for you to consider in the health cluster.

In studying the health cluster, there is always something new, different and unique to learn because you are working in an area which is centered around people.

NAME: ____

OCCUPATIONS RELATED BY HEALTH CATEGORIES

Take the alphabetical list of health occupations and place occupations under each of the categories. Talk it over with the people in your group to determine how they are related to each other and to the category. Ask for help if you need it. Put an asterisk (*) next to occupations which need to be listed in two categories due to job description and/or job location. Six occupations will be listed twice.

1. MEDICAL, DENTAL, AND NURSING

1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________
6. ________________________________
7. ________________________________
8. ________________________________

2. RELATED HEALTH

1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________
6. ________________________________

3. ADMINISTRATIVE, BUSINESS, AND CLERICAL

1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________
6. ________________________________
7. ________________________________
8. ________________________________

4. ENVIRONMENTAL AND PUBLIC HEALTH

1.______________________________
2.______________________________
3.______________________________
4.______________________________
5.______________________________
6.______________________________

5. HEALTH AND MEDICAL RESEARCH AND COMMUNICATIONS

1.______________________________
2.______________________________
3.______________________________
4.______________________________
5.______________________________
6.______________________________
7.______________________________

6. CLINICAL LABORATORY AND RELATED TECHNICAL

1.______________________________
2.______________________________
3.______________________________
4.______________________________
5.______________________________
6.______________________________
7.______________________________
8.______________________________

7. PHYSICAL, MENTAL, AND SOCIAL REHABILITATION

1.______________________________
2.______________________________
3.______________________________
4.______________________________
5.______________________________
6.______________________________
7.______________________________

HEALTH OCCUPATIONS

Admitting Clerk
Artificial Plastic Eye Maker
Audiologist
Central Supply Clerk
Cytotechnologist
Dental Hygienist
Dietician
Emergency Medical Technician
Environmental Health Technician
Geriatric Activity Director
Hospital Cashier
Industrial Hygienist
Licensed Practical Nurse
Medical Illustrator
Medical Librarian
Medical Photographer
Medical Record(s) Administrator
Medical Research Technician
Medical Secretary
Mortician
Music Therapist
Occupational Therapist
Optician
Orderly
Orthodontist
Pathologist
Periodontist
Pharmacist
Physical Therapist
Physician's Assistant
Psychologist
Public Health Inspector
Radiation Monitor
Radiologist
Registered Medical Technologist
Registered Nurse
Rehabilitation Aide
Research Scientist
Respiratory Therapist
Sanitarian
Science Writer
Speech Pathologist
Storekeeper
Systems Safety Analyst
Technical Writer
Thanatologist
Ward Clerk

OCCUPATIONS RELATED BY THE HEALTH CATEGORIES

1. MEDICAL, DENTAL, AND NURSING

1. Dental Hygienist
2. Licensed Practical Nurse
3. Orderly
4. Orthodontist
*5. Pathologist
6. Physician's Assistant
7. Registered Nurse
*8. Ward Clerk

2. RELATED HEALTH

1. Emergency Medical Technician
2. Audiologist
3. Mortician
4. Optician
5. Pharmacist
6. Dietician
7. Speech Pathologist

3. ADMINISTRATIVE, BUSINESS, AND CLERICAL

1. Admitting Clerk
2. Hospital Cashier
3. Medical Secretary
*4. Ward Clerk
5. Storekeeper
6. Central Supply Clerk
*7. Medical Records Administrator
*8. Medical Librarian

4. ENVIRONMENTAL AND PUBLIC HEALTH

1. Environmental Health Technician
2. Industrial Hygienist
3. Sanitarian
4. Systems Safety Analyst
*5. Radiation Monitor
6. Public Health Inspector

5. HEALTH AND MEDICAL RESEARCH AND COMMUNICATIONS

1. Medical Illustrator
2. Medical Photographer
*3. Medical Records Administrator
*4. Research Scientist
*5. Medical Librarian
6. Science Writer
7. Technical Writer

6. CLINICAL LABORATORY AND RELATED TECHNICAL

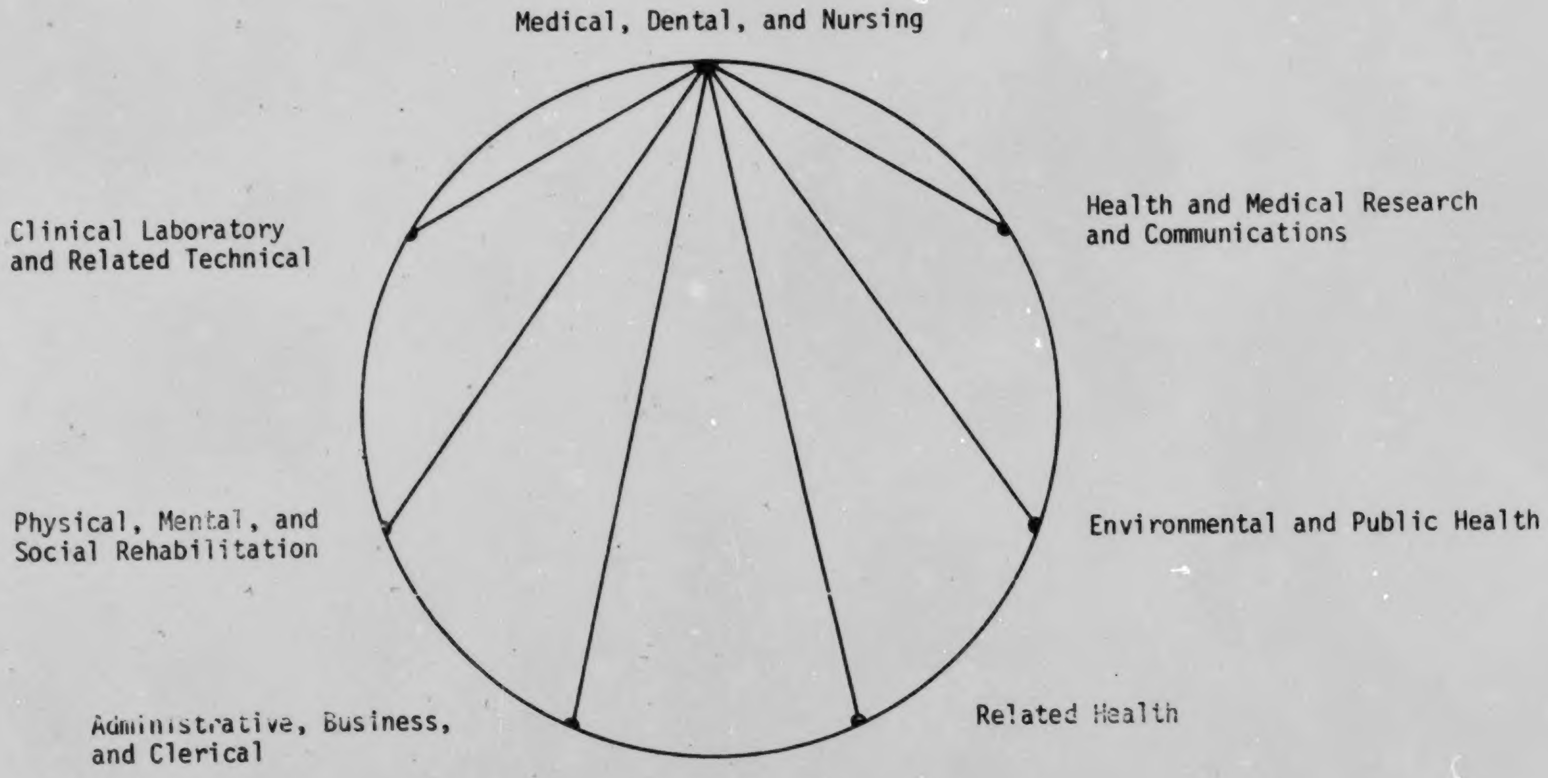
1. Cytotechnologist
2. Registered Medical Technologist
*3. Pathologist
4. Radiologist
5. Respiratory Therapist
6. Artificial Plastic Eye Maker
*7. Radiation Monitor
*8. Research Scientist

7. PHYSICAL, MENTAL, AND SOCIAL REHABILITIATION

1. Geriatric Activity Director
2. Occupational Therapist
3. Music Therapist
4. Physical Therapist
5. Rehabilitation Aide
6. Thanatologist
7. Psychologist

*These occupations are listed in two categories because of the nature of the work and the job description.

THE HEALTH CLUSTER


Medical, Dental, and Nursing
Clinical Laboratory and Related Technical
Health and Medical Research and Communications
Physical, Mental, and Social Rehabilitation
Environmental and Public Health
Administrative, Business, and Clerical
Related Health

VISUAL #1

LEARNING ACTIVITY PACKAGE 2

Category: Health Occupations (General)

Focus: Life Worth/Job Value

Activity: Class Discussion

Objective: At the conclusion of this lesson, the student will be able to demonstrate through active class participation, what he/she thinks are important qualities in people and the jobs that they do.

EQUIPMENT, SUPPLIES, AND FORMS

1. What's Important to People About a Job (see sample enclosed in this learning package)
2. LAP 4: Health Needs/Life-Time Span

RATIONALE

The purpose of this activity is to allow the students an opportunity to verbally express what they think and feel is important about people and the jobs that they do.

SUGGESTED PROCEDURES

The instructor should assume a non-directive role, encouraging students to express their own feelings. There are no right or wrong answers.

Here are some suggested discussion questions that you may want to raise in class:

1. Is your career in life important? Explain.
2. What is an important job in life? Why is it important?
3. What does an important person do? List some of the details, such as specific tasks, etc.
4. Are there unimportant jobs?
5. What makes a job unimportant?
6. State a conclusion about persons and jobs based on this discussion.

This discussion can lead to a consideration of many issues such as: power, wealth, self-worth, self-satisfaction, a person's purpose in life and so on.

Following the discussion, have the students fill out the handout, What's Important to People About a Job. Give the students an opportunity to formulate an opinion as to how important fringe benefits such as vacations, life insurance, advancement opportunities, health coverage, etc., are to their decision about their jobs. (This is also suggested as an exercise to continue in LAP 4. In LAP 4 you may wish to review the answers given here to encourage a deeper look into and an expansion upon the topics.

WHAT'S IMPORTANT TO PEOPLE ABOUT A JOB?

List five qualities of a job that would be important for each of these people.

	AGE	BACKGROUND
1.	16-20	Little or no job experience; excellent health; no special skills or talents.
2.	21-25	Single; college education; extrovert; no work experience; no debts.
3.	21-25	Married; two children; highly skilled and talented; physical work; high school dropout.
4.	26-35	Same person as #3; bad health due to injury; limited physical ability.
5.	26-35	Divorced; two young children; high school education; no work experience.
6.	26-35	Same person as #2; now married; young child.
7.	36-45	Married; college education; four children.
8.	36-45	Single; college education; highly motivated and disciplined; introvert.
9.	46-58	High school education; manual work; divorced; four children; fair health.
10.	46-58	Single; good health.
11.	59-65	High school education; three grown children, five grandchildren; history of heart trouble starting around age 60.

LEARNING ACTIVITY PACKAGE 3

Category:	Health Occupations (General)
Focus:	Student Likes and Dislikes
Activity:	Individual/Group Activities
Objective:	At the conclusion of this lesson, the student will select three health careers based upon the characteristics discovered in their likes and dislikes exercise.

EQUIPMENT, SUPPLIES, AND FORMS

1. Student form: My Likes and Dislikes (see sample enclosed in this learning package)
2. Scissors
3. Sheet of heavy paper
4. Glue

RATIONALE

This exercise is to get the student to make one decision at a time about himself/herself which will, at the end of the assignment, give the student a visual composite of what he/she likes and does not like to do. This is a good exercise for helping students understand more about themselves and health careers that they are best suited for. They may decide that they would not select a health career.

SUGGESTED PROCEDURES

Reading over the sentences that have been sorted into likes and dislikes will help the teacher to better understand the students and to assist them with appropriate career choices.

Allow the students to work in small groups; encourage them to talk about what they like to do and do not like to do as they cut the statements apart and separate each statement into piles of: "Likes", "Dislikes", and "Not Sure".

Encourage students to force themselves to make a decision on "likes" or "dislikes". Explain that the more "not sures" there are the more difficult it is to make a career decision. Be sure to emphasize that the student is not forever bound to these decisions; that likes, dislikes, and career decisions do change as one experiences life.

Have the students follow these steps:

1. Cut the statements apart.
2. Sort the statements into three stacks: likes, dislikes, not sure.
3. Paste the "likes" statements onto the front side of a heavy piece of paper; title the side, "My Likes".
4. Paste the "dislikes" statements onto the backside of the same sheet of paper; title the side, "My Dislikes".
5. Using any reference material (lists from previous lessons, other people's suggestions and their own ideas) come up with three possible health careers to be considered for further study.

MY LIKES AND DISLIKES

Understanding yourself is the most important consideration in making a career decision. One way to begin understanding yourself better is to sort out what you like and what you dislike.

Directions:

1. Carefully cut out the cards.
2. Sort the cards into three piles: "Likes," "Not Sure," and "Dislikes." (The more decisions you make about likes and dislikes, the easier the career decision). Try for as few "not sures" as possible.
3. After sorting the cards, pick up the "likes" pile and arrange the cards in order of importance to you.
4. Number your "likes" starting with number 1 as most important to you, number 2 as second most important to you, etc.
5. Rank your "dislikes" and number 1 as greatest "dislike" to you, number 2 as second greatest "dislike" to you, etc.
6. Paste your "likes" on a sheet and title the sheet "My Likes."
7. Paste your "dislikes" on the back and title the sheet "My Dislikes."
8. Staple the "not sure" onto this sheet.
9. Name three possible careers in health which are compatible with what you like to do.

I like to solve problems.	I like to work with ideas.	I like to work outside.	I like to work under pressure.
I like to concentrate.	I like to meet people.	I like to work inside.	I like to carry out other people's instructions.
I like to work "behind the scenes."	I like to work with small, delicate objects.	I would like to work in a large institution.	I would like to work eight hours a day, five days a week.
I would like to work with the government.	I like to understand why people act as they do.	I like to write.	I like to work on a one-to-one basis.
I like to adapt to different situations.	I like to work with large machines.	I like to work in a small community.	I like to spend a lot of time studying.
I would like to have my own business.	I like to give instructions.	I like to work with my hands.	I like fast-moving experiences.
I like to work part-time.	I like to work with adults.	I like to accept responsibility.	I would like to work with computers.

I like to do research.	I like to feel needed.	I like to be the person in charge.	I like to work with children.
I like to teach.	I like to travel.	I like to make decisions.	I would like to have a prestigious job.
I would like to live in many different cities.	I like to become very involved in my work.	I like to be involved in the community.	I like to influence people.
I like to help others.	I like to work with food.	I like to be active.	I like to draw.
I like to type.	I like a routine job.	I would like to work in the suburbs.	I like to work with deadlines.
I like to work with people.	I like to take pictures.	I like to work with details.	I like to organize things.
I like to make a lot of money.	I like crafts.	I like to have leisure time.	I would like to work in a city.

LEARNING ACTIVITY PACKAGE 4

Category:	Health Occupations (General)
Focus:	Health Needs/Life-Time Span
Activity:	Student Exercise/Class Discussion
Objective:	At the conclusion of this lesson, the student will be able to describe on a student worksheet what health needs are important to an individual at different times in the life span.

EQUIPMENT, SUPPLIES, AND FORMS

1. Health Needs (see sample in this learning package)
2. Life-Time Span (see sample in this learning package)
3. What's Important to People About a Job? (see sample in this learning package)
4. Consumer education in health materials from library (see References and Resources sections in the back of this notebook)

RATIONALE

The purpose of this activity is to provide students with an opportunity to explore health needs of people at different age levels, and to assist students in understanding the impact of one's health upon one's job.

SUGGESTED PROCEDURES

There are no right or wrong answers in these exercises. Students should be encouraged to openly express their feelings on each topic.

Some classes will be able to complete all three forms in a class period; most will not. This lesson, with teacher and student discussion, could easily be a two-day lesson. It is suggested that the forms be completed in the following order: 1) Life-Time Span, 2) Health Needs, and, if there is time, 3) What's Important to People About a Job?

Life-Time Span. The teacher will need to help some students get started with this. Sample answers for age six are:

What's Important:	1. Friends; a best friend 2. where he/she can play; food
What Decisions:	1. to like school or not to like school 2. to do what he/she is told, or not to do what he/she is told.

Health Needs. Have the students consider the problems of persons who are: married/unmarried; widowed/divorced; with or without children; with slight or severe injuries; with typical and unusual illnesses; and faced with the increased cost of insurance coverage for preventative health care.

What's Important to People About a Job? Here the students will have an opportunity to crystalize an understanding of why fringe benefits such as life insurance and health insurance coverage can be a big incentive to a job.

ALTERNATE ACTIVITIES

1. Divide the class into three groups and give each group a different form. Allow one-half of the class period for the three groups to complete the forms. In the second half of the period, have someone from each group summarize the

type of information gathered and what the group learned as they completed the activity.

2. Arrange for a consumer education instructor or health insurance salesperson to speak to the class. These individuals are generally knowledgeable regarding health needs, and the impact of health status upon the job one holds.

HEALTH NEEDS

At different stages of life an individual's need for health care delivery may vary or remain the same. Decide and list three of the most important health needs of any individual at each time period in a life span.

Birth to 18 months

____

____

____

18 months to 5 years

____

____

____

5 years to 10 years

____

____

____

HEALTH NEEDS (CONT'D)

10 years to 13 years

____

____

____

13 years to 16 years

____

____

____

16 years to 19 years

____

____

____

19 years to 25 years

____

____

____

25 years to 30 years

____

____

____

HEALTH NEEDS (CONT'D)

30 years to 35 years

35 years to 55 years

55 years to 65 years

65 years to 80 years

80 years to 100 years

LIFE-TIME SPAN

Each letter identifies a time in an individual's life. Build a lifelong career by deciding what are the two most important components at each time in his or her life, and identify decisions the person will have to make. Record the information below.

(Birth) 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 (Death)

A B C D E F G H I J K

Point in Time	What is Important in Person's Life?	What Decisions are Made by Person?
A	1 2	1 2
B	1 2	1 2
C	1 2	1 2
D	1 2	1 2
E	1 2	1 2
F	1 2	1 2
G	1 2	1 2
H	1 2	1 2
I	1 2	1 2
J	1 2	1 2
K	1 2	1 2

WHAT'S IMPORTANT TO PEOPLE ABOUT A JOB?

List five qualities of a job that would be important for each of these people.

	AGE	BACKGROUND
1.	16-20	Little or no job experience; excellent health; no special skills or talents.
2.	21-25	Single; college education; extrovert; no work experience; no debts.
3.	21-25	Married; two children; highly skilled and talented; physical work; high school dropout.
4.	26-35	Same person as #3; bad health due to injury; limited physical ability.
5.	26-35	Divorced; two young children; high school education; no work experience.
6.	26-35	Same person as #2; now married; young child.
7.	36-45	Married; college education; four children.
8.	36-45	Single; college education; highly motivated and disciplined; introvert.
9.	46-58	High school education; manual work; divorced; four children; fair health.
10.	46-58	Single; good health.
11.	59-65	High school education; three grown children, five grandchildren; good health; history of heart trouble starting around age 60.

LEARNING ACTIVITY PACKAGE 5

Category: Health Occupations (General)

Focus: Introduction to Medical Terminology

Activity: Student Exercises

Objective: At the conclusion of this lesson, the student will demonstrate knowledge of the fact that medical occupational titles are composed of Latin and Greek root words by completing the student form, Introduction to Medical Language.

EQUIPMENT, SUPPLIES, AND FORMS

1. Introduction to Medical Language (see sample enclosed in this learning package)
2. Medical dictionaries
3. Occupational Outlook Handbook
4. Dictionary of Occupational Titles

RATIONALE

The purpose of this activity is to help the student understand that complex and difficult—sounding medical titles can be reduced to Latin and Greek root words. The root words explain the work performed by the person with a given occupational title. It is important for students to discover that they will be working with this terminology in the health care field.

SUGGESTED PROCEDURES

The class should be divided into groups of three to five students each. Each group should have a copy of a medical dictionary. The students should complete this activity by following the directions in each section of the Introduction to Medical Language exercise.

If you choose the individual project approach, it should be on a contract basis with each student.

ALTERNATE ACTIVITIES

1. Teacher and class might do "Introduction to Medical Language" exercise together using chalkboard or overhead projector, the teacher should write out the correct spelling of each answer. This is especially good for a class with learning disabilities.
2. Invite a foreign language teacher to be a classroom resource person to explain the Greek and Latin root words.

Name ____________________

INTRODUCTION TO MEDICAL LANGUAGE

Most medical words are made up of basic Greek and Latin root words. The best way to understand their meanings is to convert the Greek and Latin roots to English.

1. Using a medical dictionary, look up the Greek and Latin root words to find the English meaning. Write the appropriate meaning in the space provided after each root word.
    1. ortho ____
    2. ologist ____
    3. physic ____
    4. pathos ____
    5. donita ____
    6. pedio ____
    7. iastric ____
    8. psycho ____
    9. cyte ____
    10. histo ____
    11. oste ____
    12. myo ____
    13. audio ____
    14. neuro ____
    15. heme ____
    16. meter ____
    17. grapho ____
    18. gram ____
    19. dermo ____
    20. hyro ____
2. Based on what you just learned about the meanings of Greek and Latin root words what do the following medical people do?
    1. Neurologist ____
    2. Pathologist ____
    3. Cytologist ____
    4. Psychiatrist ____
    5. Audiologist ____
    6. Orthodontist ____
    7. Physiologist ____
    8. Histologist ____
    9. Hematologist ____
    10. Podiatrist ____
3. Using your present knowledge of medical names, make up 10 of your own constructed medical words or occupational titles.

	Medical Word/Title	English Meaning
1.		
2.		

Medical Word/Title	English Meaning
3. ________	________
4. ________	________
5. ________	________
6. ________	________
7. ________	________
8. ________	________
9. ________	________
10. ________	________

4. Health Work Titles. What do these titles mean?

    1. Personnel Director ________
    2. Hematologist ________
    3. Pathologist ________
    4. Physical Therapist ________
    5. Anaesthesiologist ________
    6. Cardiologist ________
    7. Pharmacist ________
    8. Ward Clerk ________
    9. Neurologist ________
    10. Inhalation Therapist ________
    11. Sanitary Engineer ________
    12. Nutritionist ________
    13. Gynecologist ________
    14. Electrocardiograph Technician ________
    15. Radiologist ________

5. Using the medical dictionary, look up 10 medical terms not listed in Question 2 and list 10 root words and meanings that have not been given in Question 1.

LEARNING ACTIVITY PACKAGE 6

Category: Health Occupations (General)

Focus: Occupational Titles

Activity: Student Exercises

Objective: At the conclusion of this lesson, the student will demonstrate, by completing two written exercises, knowledge of the careers contained in this health cluster.

EQUIPMENT, SUPPLIES, AND FORMS

1. Health Career-O-Gram (see sample enclosed in this learning package)
2. Health Careers - Matching Game (see sample enclosed in this learning package)
3. Occupational Outlook Handbook
4. Dictionary of Occupational Titles

RATIONALE

The purpose of this lesson is to acquaint the students with the occupations that they will learn about in the health cluster and to provide each student with a working definition and/or information about these careers.

SUGGESTED PROCEDURES

The Health Career-O-Gram is a word-finding game in which health career titles must be found in the grid of letters. Note some of the careers in this game read from right to left (backwards), up and down, and may be abbreviated. Explain this to the students before starting the exercise.

The Health Careers Matching Game is completed by matching the job titles with their definitions.

For the matching game it may be necessary for the students to use some reference materials, such as the Occupational Outlook Handbook, to find definitions for health careers.

ALTERNATE ACTIVITIES

1. Provide one-half of the class with index cards each having a health career job title typed on it. The other half of the class will have index cards with definitions for the health career jobs on them. The object is to match the health careers with the definitions.

2. Show the film: Is A Career In The Health Service For You?, Counselor Films, Inc., Illinois Office of Education, Media and Resource Center, 100 North First Street, Springfield, IL 62777

HEALTH CAREER-O-GRAM

Sanitarian
Ambulance Attendant
Geriatric Activity Aide
Medical Illustrator
Physicians Assistant
Psychiatrist
Research Scientist
Periodontist
Cytologist
Ward Clerk
Nurses Aide
RN
Respiratory Therapist
Physical Therapist
Medical Photographer
Speech Pathologist
Medical Social Worker
Dental Assistant
Medical Librarian
Pathologist
Radiologist
Optician
Orderly
DDS
Medical Record Technician
Recreation Therapist
Medical Technician
Dental Hygienist
Medical Secretary
Admitting Clerk
Audiologist
Orthodontist
Pharmacist
Mortician
LPN

See if you can circle all 35 occupations spelled out below. The words are spelled backward and forward. Some of the words are abbreviated. You can find the words by looking from left to right...right to left... from top to bottom...and even diagonally! Use the list in the box to keep track of the words you have found.

K R E S P I R A T O R Y T H E R A P I S T N P L T M Q X

J E K S E W A S T S S A S N A I C I S Y H P S F S E M S

R S R S P E E C H P A T H O L O G I S T A B Y E I D E G

E E E M E D S E C R E T A R Y P M E N T O T C X P L D O

H A L R A D I O L O G I S T M E A N H O M Z H N A I S R

P R C E G N A I C I T P O I S R S O C U A O I T R B O D

A C G D N A I R A T I N A S G I L H E M E T A T E R C E

R H N I T O W N E R T S I T N O D O H T R O T A H A I R

G S I A M E D R E C T E C H G D L H J O N T R E T R A L

O C T S H C E T D E M T S I G O L O I D U A I C L I L Y

T I T E P H A R M A C I S T Z N E H T U D A S N A A W P

O E I S K I N A I C I T R O M T T L I Y E T T A C N O K

H N M R T S I P A R E H T N O I T A E R C E R L I S R W

P T D U K R E L C D R A W T S S A L A T N E D U S D K Q

D I A N M E D I L L U S T R A T O R E A D S A B Y D E H

E S G E R I A T R I C A C T I V I T Y A I D E M H N R Z

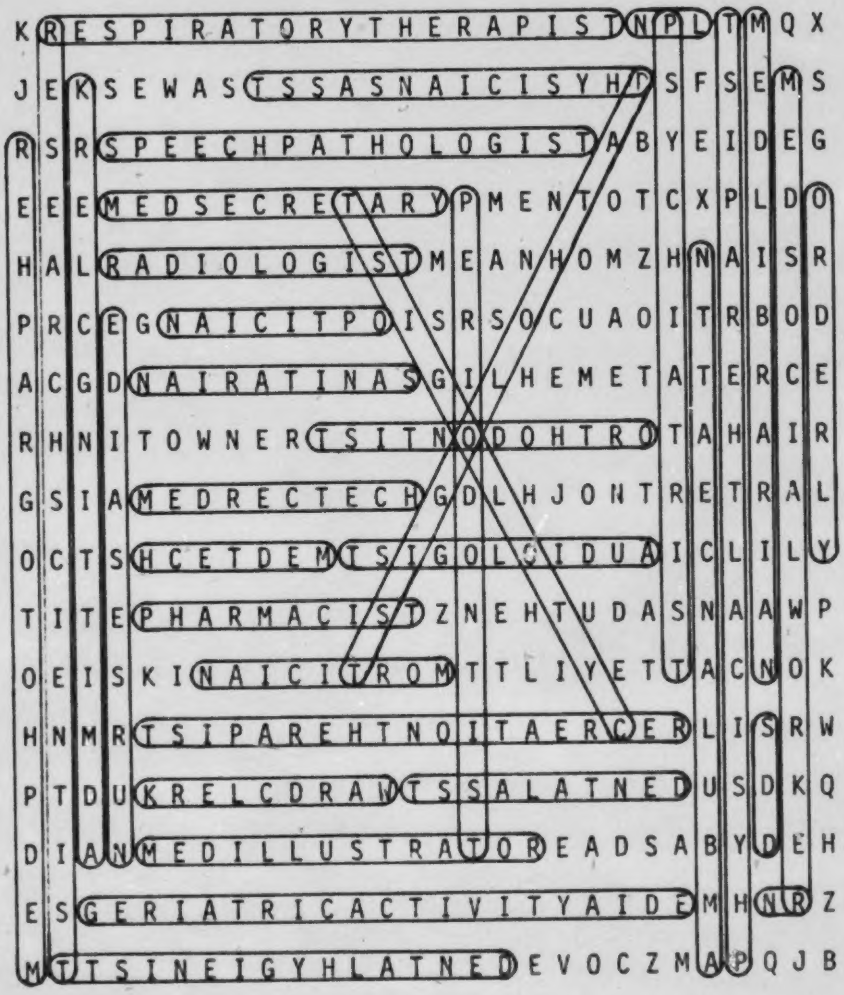
M T T S I N E I G Y H L A T N E D E V O C Z M A P Q J B

Teachers Key

HEALTH CAREER-O-GRAM

Sanitarian
Ambulance Attendant
Geriatric Activity Aide
Medical Illustrator
Physicians Assistant
Psychiatrist
Research Scientist
Periodontist
Cytologist
Ward Clerk
Nurses Aide
RN
Respiratory Therapist
Physical Therapist
Medical Photographer
Speech Pathologist
Medical Social Worker
Dental Assistant
Medical Librarian
Pathologist
Radiologist
Optician
Orderly
DDS
Medical Record Technician
Recreation Therapist
Medical Technician
Dental Hygienist
Medical Secretary
Admitting Clerk
Audiologist
Orthodontist
Pharmacist
Mortician
LPN

See if you can circle all 35 occupations spelled out below. The words are spelled backward and forward. Some of the words are abbreviated. You can find the words by looking from left to right...right to left... from top to bottom...and even diagonally! Use the list in the box to keep track of the words you have found.



```
K R E S P I R A T O R Y T H E R A P I S T N P L T M Q X
J E K S E W A S T S S A S N A I C I S Y H D S F S E M S
R S R S P E E C H P A T H O L O G I S T A B Y E I D E G
E E E M E D S E C R E T A R Y P M E N T O T C X P L D O
H A L R A D I O L O G I S T M E A N H O M Z H N A I S R
P R C E G N A I C I T P O I S R S O C U A O I T R B O D
A C G D N A I R A T I N A S G I L H E M E T A T E R C E
R H N I T O W N E R T S I T N O D O H T R O T A H A I R
G S I A M E D R E C T E C H G D L H J O N T R E T R A L
O C T S H C E T D E M T S I G O L O I D U A I C L I L Y
T I T E P H A R M A C I S T Z N E H T U D A S N A A W P
O E I S K I N A I C I T R O M T T L I Y E T T A C N O K
H N M R T S I P A R E H T N O I T A E R C E R L I S R W
P T D U K R E L C D R A W T S S A L A T N E D U S D K Q
D I A N M E D I L L U S T R A T O R E A D S A B Y D E H
E S G E R I A T R I C A C T I V I T Y A I D E M H N R Z
M T T S I N E I G Y H L A T N E D E V O C Z M A P Q J B
```

HEALTH CAREERS - MATCHING GAME

Part I.

____A. The nation's second largest group of professionally employed women.

____B. Provides skilled care to the sick, working under general supervision of physicians and registered nurses.

____C. Along with nursing aides and attendants, make up the largest group of nursing personnel.

____D. Assists the doctor in surgery and/or intensive care.

____E. Is the person in charge of the laboratory.

____F. Is one who straightens teeth.

____G. Is a medical doctor trained to care for people who are mentally ill.

____H. Uses slides to look for cancer cells.

____I. Is a specialist in the surgery and treatment of diseases of the teeth and gums.

____J. Exposes and develops dental x-rays, and cleans teeth.

____K. Wears a uniform, records appointments, and sterilizes the dental equipment.

____L. Is specially trained in listening and hearing testing procedures.

1. Dental Assistant
2. Cytotechnologist
3. Orthodontist
4. Registered Nurse
5. Audiologist
6. Orderly
7. Peridontist
8. Dental Hygienist
9. Physician's Assistant
10. Pathologist
11. Psychiatrist
12. Licensed Practical Nurse

HEALTH CAREERS - MATCHING GAME

Part II.

____A. Works with or is an audiologist, and needs a lot of patience and an ability to communicate and teach.

____B. Is a specialist in environmental health.

____C. Has skill and training in art as well as medicine.

____D. Uses a camera in his/her work.

____E. Uses the scientific method for discovery and testing.

____F. Works in a laboratory doing routine tests.

____G. Fills the medical prescriptions written by a doctor.

____H. Helps keep the elderly well by keeping them active.

____I. Works to rehabilitate patients and help them get back into the working world.

____J. Helps patients to overcome physical disabilities.

____K. Works on the floor or ward of a hospital under supervision of a registered nurse and is responsible for keeping patient records.

____L. Is the person working in a hospital who takes information such as: patient's name, address, doctor's name, cause of hospital stay, insurance company, etc.

1. Medical Technician
2. Occupational Therapist
3. Geriatric Activity Aide
4. Physical Therapist
5. Medical Illustrator
6. Research Scientist
7. Speech Pathologist
8. Ward Clerk
9. Admitting Clerk
10. Medical Photographer
11. Pharmacist
12. Sanitarian

HEALTH CAREERS - MATCHING GAME

Part III.

____A. Helps with patient care, serves meals, feeds hospital patients, etc.

____B. Frequently works on holidays and in bad weather.

____C. Is licensed both as an embalmer and a funeral director.

____D. Is also known as a medical records administrator.

____E. Works with the accounts receivable and payable in a hospital.

____F. Gathers, preserves, and codes information.

____G. Has special training and skills in the spelling and use of medical terms.

____H. Uses equipment to help patients overcome breathing problems.

____I. Measures the range of vision and prescribes corrective lenses.

____J. Needed: a protective shield between the patient and this work.

____K. Works with dying patients and counsels the patient, friends, and family.

1. Optician
2. Medical Records Technician
3. Medical Secretary
4. Thanatologist
5. Mortician
6. Nurse's Aide
7. Ambulance Attendant
8. Medical Librarian
9. Radiologist
10. Respiratory Therapist
11. Hospital Cashier

Teacher's Key

HEALTH CAREERS MATCHING GAME

Part I.

4 A.
12 B.
6 C.
9 D.
10 E.
3 F.
11 G.
2 H.
7 I.
8 J.
1 K.
5 L.

Part II.

7 A.
12 B.
5 C.
10 D.
6 E.
1 F.
11 G.
3 H.
2 I.
4 J.
8 K.
9 L.

Part III.

6 A.
7 B.
5 C.
8 D.
11 E.
2 F.
3 G.
10 H.
1 I.
9 J.
4 K.

LEARNING ACTIVITY PACKAGE 7

Category:	Health Occupations (General)
Focus:	Overview of Interests/Qualifications
Activity:	Student Exercises
Objective:	At the conclusion of this lesson, the student will be able to describe on a student worksheet his/her understanding of himself/herself, his/her interests and some of the qualifications needed for entering health careers.

EQUIPMENT, SUPPLIES, AND FORMS

1. Your Interests and Health Careers (see sample enclosed in this learning package)
2. Do you Know the Qualifications Needed to Enter a Health Occupation? (see sample enclosed in this learning package)
3. Careers (see sample enclosed in this learning package)
4. What Do You Consider a "Dream" Job? (see sample enclosed in this learning package)
5. Changing Quackery into Health Truths (see sample enclosed in this learning package)
6. Dictionary of Occupational Titles
7. Occupational Outlook Handbook

RATIONALE

The purpose of this lesson is to allow the students an opportunity to focus on what interests and qualifications are important to a person considering a health occupation. It then centers on the student's goals and dreams. It provides an opportunity for the students to actively match their personal attributes with a health career.

SUGGESTED PROCEDURES

Hand out the interest and qualification forms first, and have the students complete them by small group discussion. Explain that the answer is not as important as the discussion. There isn't necessarily a right answer. Through discussions, the student will discover much about each occupation listed.

As the groups complete the two forms, hand out the Careers form and the What Do You Consider A "Dream" Job? form to each student.

Part A: Who Am I? of the Careers form may be difficult for the students to answer. Encourage the students to think before answering and to be realistic with their answers. Suggest that they take these home to talk over and share with their parents. Some students will say they don't know what their parents want; this provides a stimulus for some very beneficial conversations between students and parents.

If the class is open and receptive, have the students share their goals and dreams with another class member. However, do not force this.

The Changing Quackery into Health Truths form is an optional activity for those who finish the above assignment quickly.

The teacher's manner of presentation makes a lot of difference as to the students' attitude in the quality and completion of this material. The students tend to take this as seriously as the teacher does.

YOUR INTERESTS AND HEALTH CAREERS

Before very long, you and your friends will be talking about the kinds of work you may want to do when you finish school. To see if you can spot the relationship between your interests and your life's work, decide what you would say to these friends about the kind of health career they might choose.

1. Tom is one of the stars on the football team. Even though he likes to play football, Tom spends all of his spare time building model airplanes. He carefully designs and works out every detail of each part and puts them through a series of tests. Put a check beside the kind of career you would suggest to Tom if he asked you to help him make a choice of a health career.

   A. Recreational Therapist
   B. Biomedical Engineer
   C. Heart-Lung Technician
   D. Hospital Maintenance Engineer

2. Susan is a paper carrier. In the six months that she has been carrying the evening paper she has managed to build up a far greater number of customers than any of her fellow newspaper carriers. In fact, Susan is scheduled to receive an award when the newspaper holds its spring awards dinner. Besides being a good salesperson, Susan likes to make her own decisions, basing them on mathematics and logic. The thing she seems to enjoy most is explaining things by comparing figures. She is interested in entering the health field, but is not sure she will fit into a health service. What kind of a health career do you think Susan would enjoy and be successful in?

   A. Physician
   B. Biomathematician
   C. Medical Technician
   D. Pharmacist

3. Jeanne is active in the Future Homemaker's Club. She designs and makes her own clothes and has won several prizes at the county fair. Jeanne especially likes to care for children and often volunteers her time to work at the day-care center. She seems to find it a challenge to be able to make a child feel better when he feels bad or is accidently hurt while playing. What kind of a health career do you think Jeanne would enjoy?

   A. Pediatric Nurse
   B. Medical Illustrator
   C. Homemaker Rehabilitation Consultant
   D. Director of Volunteer Services

4. Ken enjoys cooking. He often plans and prepares the family's meal, being very careful to see that each meal is well balanced. Although Ken likes to cook, his main interest is in helping people plan their diet. In fact, Ken has been assisting a friend to plan her diabetic diet with a great deal of success. Ken's parents want him to become a teacher. Although Ken thinks he will probably follow their wishes, he talks about entering a health career. If Ken asked you for advise, what health occupation would you recommend?

A. Food Technologist
B. Food Inspector
C. Therapeutic Dietician
D. Dental Hygienist

5. Mark is a member of the science club. Even though he likes science, Mark seems more concerned with the social aspect of helping people. He often organizes groups to help needy families. Mark is trying to decide what kind of a health career he could enter that would give him an opportunity to help people meet their social needs. In what kind of a health career do you think Mark could achieve his desire?

A. Medical Social Worker
B. Physician
C. Nurse Consultant
D. Psychologist

DO YOU KNOW THE QUALIFICATIONS NEEDED TO ENTER A HEALTH OCCUPATION?

Each job in the health team requires certain qualifications and preparation. Test your knowledge of these qualifications by circling the best answer in each one of the following statements.

1. To become a health worker, you need to:
   - A. like people.
   - B. be a loner.
   - C. like science courses.
   - D. like to work indoors.

2. To enter a junior college nursing program, you must:
   - A. be an average student.
   - B. take the National League for Nursing Aptitude Test.
   - C. like to study human behavior.
   - D. have a major in science.

3. To become a physician, you need to be:
   - A. an average student.
   - B. be in the upper 10% of your class.
   - C. be willing to work hard.
   - D. like to study anatomy.

4. To become a certified surgical technician, you need to:
   - A. attend a vocational school's surgical technician program.
   - B. like to manage things.
   - C. work up through the ranks.
   - D. like excitement.

5. To become a hospital clerical worker you need to have high school courses in:
   - A. social studies.
   - B. business and office practices.
   - C. chemistry.
   - D. mathematics.

6. To become a sanitarian, you need to:
   - A. like outdoor work.
   - B. take some courses in biology.
   - C. serve an apprenticeship.
   - D. like to solve problems.

7. To become a hospital administrator, you need to:

   A. have a business mind.
   B. possess leadership qualities.
   C. like to work with your hands.
   D. be sympathetic with people.

8. To become a home health aide, you need to:

   A. have a flair for household management.
   B. have a desire to travel.
   C. have an associate degree.
   D. like to do literary work.

9. To become an admitting clerk, you need to:

   A. be able to interview people.
   B. have a neat appearance.
   C. be able to type.
   D. like details and accuracy.

10. To become a licensed practical nurse, you need to:

   A. like to help people.
   B. like to work at night.
   C. be able to persuade people.
   D. be able to take orders.

NAME______________________________________

Fr. Soph. Jr. Senior

CAREERS

THE GOAL OF LIFE IS TO FIND ONE'S SELF

This course is a forward step toward that goal. This assignment helps you set goals which will allow you to be your own person, based on what you think, feel, and decide.

A. WHO AM I? (Write three simple sentences)

1. I am______________________________
2. I am______________________________
3. I am______________________________

B. THREE THINGS I PLAN TO DO IN MY LIFETIME. (Write three simple sentences)

1. I plan to______________________________
2. I plan to______________________________
3. I plan to______________________________

C. THREE PLACES I PLAN TO GO IN MY LIFETIME. (Write three simple sentences)

1. I plan to go to______________________________
2. I plan to go to______________________________
3. I plan to go to______________________________

D. WHAT WILL I BE?

1. I dream of being______________________________
2. I plan to be______________________________
3. My parents want me to be______________________________
4. I probably will be______________________________

WHAT DO YOU CONSIDER A "DREAM" JOB?

Assume that you have graduated from high school and that you have the "perfect" job. In the following spaces, indicate what you will want in return for committing yourself to full-time employment and a life-time career. The more specific you are about what you want in a job, the closer you can come to finding a "dream" job to consider and decide about.

A. INCOME BENEFITS:

   1. Financial income:

   2. Fringe benefits:

   3. Promotion opportunities:

B. WORKING CONDITIONS:

   1. Location:

   2. Working hours:

   3. Associations with others:

   4. Travel:

C. NATURE OF WORK:

   1. Areas of work:

   2. Abilities used:

   3. Interests and work values involved:

D. LIFE STYLE BENEFITS:

   1. Associations with others:

   2. Personal development or change:

   3. Lifestyle mode:

NAME THREE OCCUPATIONS WHICH WOULD PROVIDE MOST OF THE QUALITIES YOU DESIRE IN A CAREER:

1.

2.

3.

CHANGING QUACKERY INTO HEALTH TRUTHS

The following are a few examples of common beliefs about health which have been scientifically proven false. Underneath each misbelief, write a health truth.

1. Bathing daily prevents illness.

   ____

2. Obesity is hereditary.

   ____

3. Chew gum and you won't have any cavities.

   ____

4. Fluoridation of water will cause disease.

   ____

5. Immunizations do not prevent diseases.

   ____

6. Diabetics can use honey but not sugar.

   ____

7. Pregnant women should eat dirt because of the minerals it contains.

   ____

8. Use gelatin to strengthen your fingernails.

   ____

9. A fat baby is a healthy baby.

   ____

10. A vitamin a day prevents illness.

    ____

11. Babies are born only during a full moon.

12. Birthmarks are caused from frightening experiences during pregnancy.

13. Cooking in aluminum utensils causes cancer.

14. Toast bread; it has less calories that way.

15. You get warts from handling frogs.

16. Eat raw eggs because they have more nutritional value than cooked ones.

17. Fresh orange juice is more nutritious than frozen orange juice.

LEARNING ACTIVITY PACKAGE 8

Category:	Health Occupations (General)
Focus:	Career Information Gathering
Activity:	Independent Study
Objective:	At the conclusion of this lesson, the student will be able to list on a worksheet, facts and information about a health career he/she has chosen.

EQUIPMENT, SUPPLIES, AND FORMS

1. Library materials
2. Career files
3. Dictionary of Occupational Titles
4. Occupational Outlook Handbook
5. You and Your Occupation (see sample enclosed in this learning package)
6. Occupations Related by Health Categories (see sample enclosed in this learning package)

RATIONALE

The purpose of this activity is to allow for individual differences. It can be used 1) to help students still exploring and learning about themselves; 2) for students still working on understanding health and community; 3) for students interested in specific information about education and requirements for health careers; and 4) for students not interested in a health career.

It provides an opportunity for the student to find out about a career for him/herself through the use of various supporting materials. It also provides an opportunity for the instructor to help individual students having problems with fact finding.

SUGGESTED PROCEDURES

This lesson can be of great benefit to the student who needs to learn how to study or how to analyze information in the decision-making process. Make this a two day lesson; do fact finding the first day and complete the You and Your Occupation form the second day.

Define a fact as "bits" or "pieces" of information. Using a sample statement, have the students find the facts in it.

Instruct students to select a career from the health field for an in-depth study during the class period. Provide the Occupations by Health Categories form to students who do not have a specific one in mind.

Tell the students to budget their time, and not to use more than 10 minutes to make their decision on which career to focus on. Emphasize that any student is free at any time during the lesson to focus on a different career if he/she finds the one being studied is not suitable or interesting. The switch in career choice should be indicated on the worksheet at the point in which the new decision was made.

The students are to title a paper with the name of a chosen career. The first fact is the name of the resource for the information that follows. Each student is to use at least one resource and list about 50 facts about a specific health career from the information given.

Students should write out the answers on the You and Your Occupation form, using available references when needed. Both cognitive skills and reference skills are needed to do this assignment.

The amount of teacher assistance needed during this assignment will depend a great deal on the maturity and study habits of the students. Some common student problems are: feeling lost as to direction or career choice; not understanding how to get from the facts to the thinking procedures needed to answer the questions; not knowing how to use reference materials; not knowing how to judge which reference materials to select.

In addition to specific health occupations, there are many businesses, clerical, and maintenance occupations that are essential but not unique to the health industry and that require no health education. Some of these occupations require educational preparation beyond high school; others can be learned on the job. Some of these occupations are:

Accountant
Admitting Officer
Business Manager
Cashier
Controller
Credit Manager
Director of Office Services
Employment Interviewers
Employment Manager
Housekeeper
Job Analyst
Laundry Manager
Laundry Worker
Maintenance Worker
Office Worker
Personnel Director
Public Relations Director
Purchasing Agent
Stationary Engineer
Stockroom Manager

ALTERNATE ACTIVITIES

1. Play a record or tape of someone telling about his/her career. Stop the record player along the way and have the students paraphrase the facts that they heard. Have the students write down facts as they listen. Run a contest to see who can list the most facts.
2. Plan a two-day lesson: on the first day, have the students fact find one or two careers, as time permits. On the second day, have the students pair up. One is the interviewer and the other the interviewee. The interviewer is to get 25 facts about the interviewee's health career (determined on the previous day). Then the two students should reverse roles so that the other student can obtain 25 facts.
3. Emphasize minority representation in health manpower using the free film: Code Blue #4409, Bureau of Health Manpower Education, Modern Talking Picture Service, Inc.

YOU AND YOUR OCCUPATION

1. Describe in three paragraphs: A) the physical tasks; B) the mental tasks; C) the social tasks associated with your job.
2. Write down in detail what you visualize the first two hours of each day would basically be like on this job.
3. In order of importance (from greatest to least), name the three greatest responsibilities of the job you have chosen.
4. List five job tasks which have to be learned before you can do them accurately.
5. Describe in detail the type of clothing you must wear for this job. Explain.
6. Name five things you must have or do to make yourself successful at any job.
7. Name three main differences between white-collar jobs and blue-collar jobs.
8. Describe how location would affect your decision in selecting a job.
9. Give two examples and supporting reasons why the working conditions of a building affect the way a person works.
10. Describe the amount of time you would probably spend in your job working with: data (information), people, and things (equipment).
11. Name 10 characteristics of the types of people you would be working with on your job.
12. Name and explain the one requirement of quality which this job demands which will be the hardest for you to meet.
13. Explain how important this job is when compared to other work situations. Tell what would happen if there was no one to do this job.
14. Explain why you feel your job choice is worthwhile.
15. Explain why you think you would perform well at this job.
16. Explain why you feel this job is the best possible occupation for you.

OCCUPATIONS RELATED BY HEALTH CATEGORIES

1. MEDICAL, DENTAL, AND NURSING

1. Dental Hygienist
2. Licensed Practical Nurse
3. Orderly
4. Orthodontist

*5. Pathologist

*6. Psychiatrist

7. Registered Nurse

*8. Ward Clerk

2. RELATED HEALTH

1. Emergency Medical Technician
2. Audiologist
3. Mortician
4. Optician
5. Pharmacist
6. Dietician
7. Speech Pathologist

3. ADMINISTRATIVE, BUSINESS, AND CLERICAL

1. Admitting Clerk
2. Hospital Cashier
3. Medical Secretary

*4. Ward Clerk

5. Storekeeper
6. Central Supply Clerk

*7. Medical Records Administrator

*8. Medical Librarian

4. ENVIRONMENTAL AND PUBLIC HEALTH

1. Environmental Health Technician
2. Industrial Hygienist
3. Sanitarian
4. Systems Safety Analyst

*5. Radiation Monitor

6. Public Health Inspector

OCCUPATIONS RELATED BY HEALTH CATEGORIES (CONT'D)

5. HEALTH AND MEDICAL RESEARCH AND COMMUNICATIONS

1. Medical Illustrator
2. Medical Photographer
*3. Medical Records Administrator
*4. Research Scientist
*5. Medical Librarian
6. Science Writer
7. Technical Writer

6. CLINICAL LABORATORY AND RELATED TECHNICAL

1. Cytotechnologist
2. Registered Medical Technologist
*3. Pathologist
4. Radiologist
5. Respiratory Therapist
6. Artificial Plastic Eye Maker
*7. Radiation Monitor
*8. Research Scientist

7. PHYSICAL, MENTAL, AND SOCIAL REHABILITATION

1. Geriatric Activity Director
2. Occupational Therapist
3. Music Therapist
4. Physical Therapist
5. Rehabilitation Aide
6. Thanatologist
*7. Psychiatrist

* These occupations are listed in two categories because of the nature of the work and the job description.

LEARNING ACTIVITY PACKAGE 9

Category:	Health Occupations (General)
Focus:	Purpose and Functions of the Health Industry
Activity:	Student Exercise
Objective:	At the conclusion of this lesson, the student will create an exercise from the lecture based on information about the purpose and function of the health industry.

EQUIPMENT, SUPPLIES, AND FORMS (see samples for each enclosed in this learning package)

1. The Purpose and Function of the Health Industry
2. Employment Prospects in the Health Fields
3. Visual A: There are Over 300 Health Related Jobs
4. Visual B: A Health Career Can Be Combined with
5. Visual C: Medical Care and Service
6. Visual D: One Million People in Allied Health
7. Visual E: Why? So much Demand!
8. Visual F: Workers in Health Occupations are Employed in

Note: Visuals A - F are selected specifically for this lesson but might be reviewed for use as background and/or support materials for other lessons.

RATIONALE

The purpose of this lesson is to provide students with an overview of the health care industry. It provides the students with an opportunity to gain information about: the scope of the industry; the causes for its unsystematic growth and development; trends in health occupations; and the further growth of the industry.

SUGGESTED PROCEDURES

Tell the students that the following themes will be covered during the class period:

1. Employment prospects in the health field
2. The purpose and function of the health industry
3. Statistics and overview of health careers
4. The reaons for the increase in health careers
5. Where health workers are employed

From the material presented, the students are to take notes and gather information to perform one or more of the following:

1. Create a crossword puzzle on one of the topics
2. Create a matching exercise on one of the topics
3. Create a fill-in-the-blank exercise on one of the topics.
4. Create a poster on one of the topics
5. Do a bulletin board about one or more of the topics
6. Draw a visual that could be used to present this material, to replace or add to the materials in this lesson.

The assignment is due in two to five days, depending on the instructions given, types of students in the class, and quality of students' work.

The puzzles and exercises can be used as: student choice; optional work; review exercises for studying; a set of exercises to be done the day before a vacation. Display the projects in the classroom upon completion.

ALTERNATE ACTIVITIES

1. Develop a student worksheet from the materials given; have the students complete the worksheet as the material is presented on an overhead or on the chalkboard.

2. Give a set of the materials to each student to read. The student is to summarize what he/she has learned in five paragraphs; and/or list a health career in which workers are employed in each locale listed in Visual F; and/or name three careers that are combined with other fields in science, industry, etc., given in Visual B.

THE PURPOSE AND FUNCTION OF THE HEALTH INDUSTRY

I. The health industry acts to protect and preserve.

A. Protection against...

1. environmental hazards
2. physical hazards
3. occupational hazards
4. animal related diseases

B. Support, Maintenance, and Restoration of Health by...

1. cure of diseases
2. maintenance of "state of health"
3. prevention of diseases
4. restoration of people to a productive life

C. Education and Research in...

1. education of health workers
2. education for general public
3. discovery of causes of diseases
4. discovery of cure of diseases
5. prevention of diseases

D. Communication and Information by...

1. alerting people of conditions hazardous to health
2. keeping people informed

II. The health industry is involved in the production and distribution of...

A. Drugs
B. Prosthesis (eyeglasses, artificial limbs, pacemakers, etc.)
C. Supplies and equipment (dressings, tape, instruments, machines)

III. The health industry acts as a link between local and world communities to...

A. Eradicate sources of disease
B. Maintain standards of healthful living
C. Assist the community and individual to handle health problems

IV. The health industry is part of all areas of work...

A. Essential to a quality of life
B. Concerned with people's total needs

EMPLOYMENT PROSPECTS IN THE HEALTH FIELDS

Employment Outlook

It is natural for students to want to know if they will be able to find employment in a particular health occupation after completing their education. It is not possible to guarantee students that they will find a job, or that there will be job openings in a specific part of the state or the nation.

A number of studies have tried to forecast how many dental hygienists, physical therapists, nurses, and other kinds of health workers will be employed at future dates. Unfortunately, these studies cannot accurately make predictions. It is relatively easy to predict how many medical technologists a small city with two hospitals will need in 1980, but it is not possible to know whether those two hospitals will have the money in 1980 to hire all the medical technologists they need.

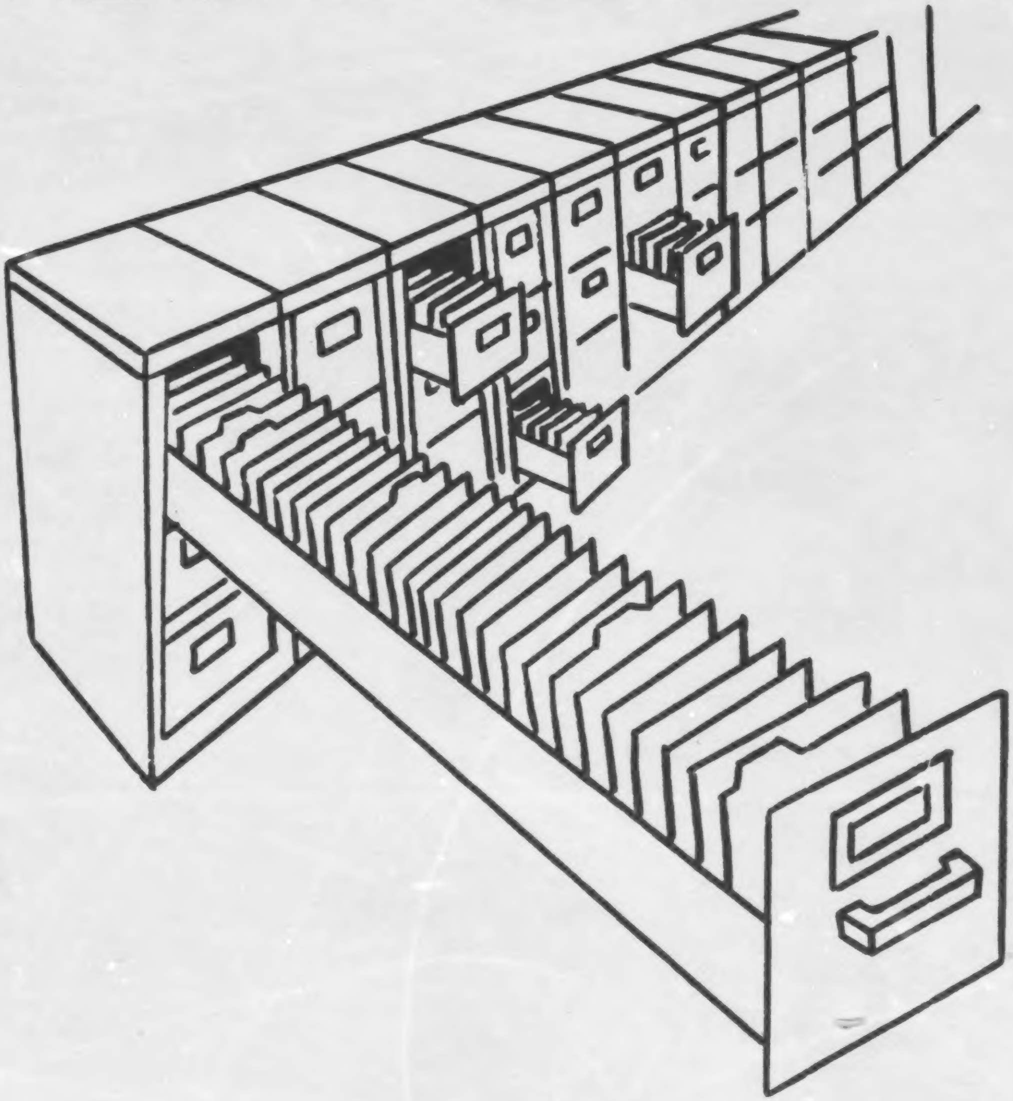
Forecast: National Health Insurance

Experts agree that some form of national health insurance will be developed during the 1970's, and this will make it possible for people to get medical attention who could not afford it in the past. Because of national health insurance it is likely that middle-income people will utilize health services more frequently than before.

The declining birth rate in the nation means that the average age of our population is increasing. This larger percentage of older people will also result in more use of health facilities.

The above factors add up to a greater need for health workers in the coming years. Some health professions will expand faster than others, and a number of new professions will emerge as the health fields continue to become increasingly specialized. Information on employment prospects is available for some professions; it is located with other information on those fields.

THERE ARE OVER 300 HEALTH RELATED JOBS



TODAY HEALTH CAREERS **are** number 2 . . .

in number of jobs available nationally.

estimates and statistics project

TOMORROW HEALTH CAREERS **will be** no. 1

VISUAL B

ACCOUNTING

AGRICULTURE

ANIMAL CARE

BUSINESS

COMMUNICATIONS

A HEALTH CAREER

can be combined with:

COMMUNITY SERVICE

EDUCATION

ENGINEERING

FINE ARTS

MARKETING

VISUAL C

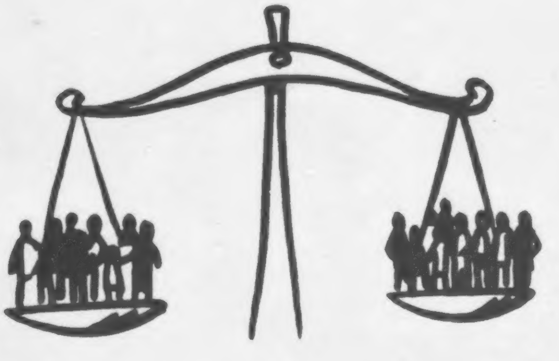
MEDICAL CARE & SERVICE

early 1900's: FOUND CURES & CONTROLS

today:

WIDESPREAD AVAILABILITY
OF CURES AND CONTROLS

PREVENTION OF ILLNESS



POPULATION CONTROL

PROTECTION OF ENVIRONMENT

VISUAL D

1,000,000 (one million) PEOPLE

will be working in Allied Health Occupations by 1980. This is . . .

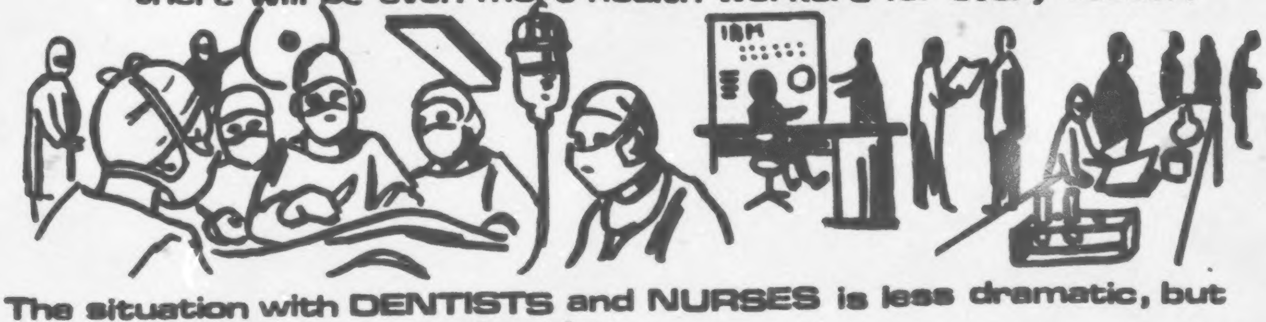
63% (sixty-three percent) MORE WORKERS

than there were in 1967.

In the early **1900's;**
there were two health workers for every doctor.

In the **1970's;**
there are tewelve health workers for every doctor.

In the **Future;**
there will be even more health workers for every doctor.



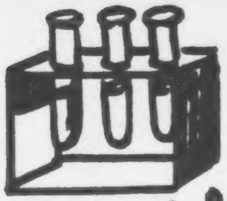
The situation with **DENTISTS** and **NURSES** is less dramatic, but the trend is in the same direction.

VISUAL E

WHY? so much demand!
WHY? so many workers!
WHY? so great an increase!

Medicare & Medicaid

Automation & Technology



Recent Scientific Advances

Expanding Population

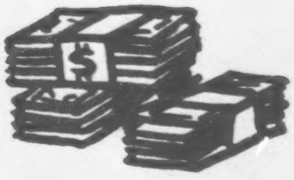
Rising Standard of Living

Increasing Health Consciousness

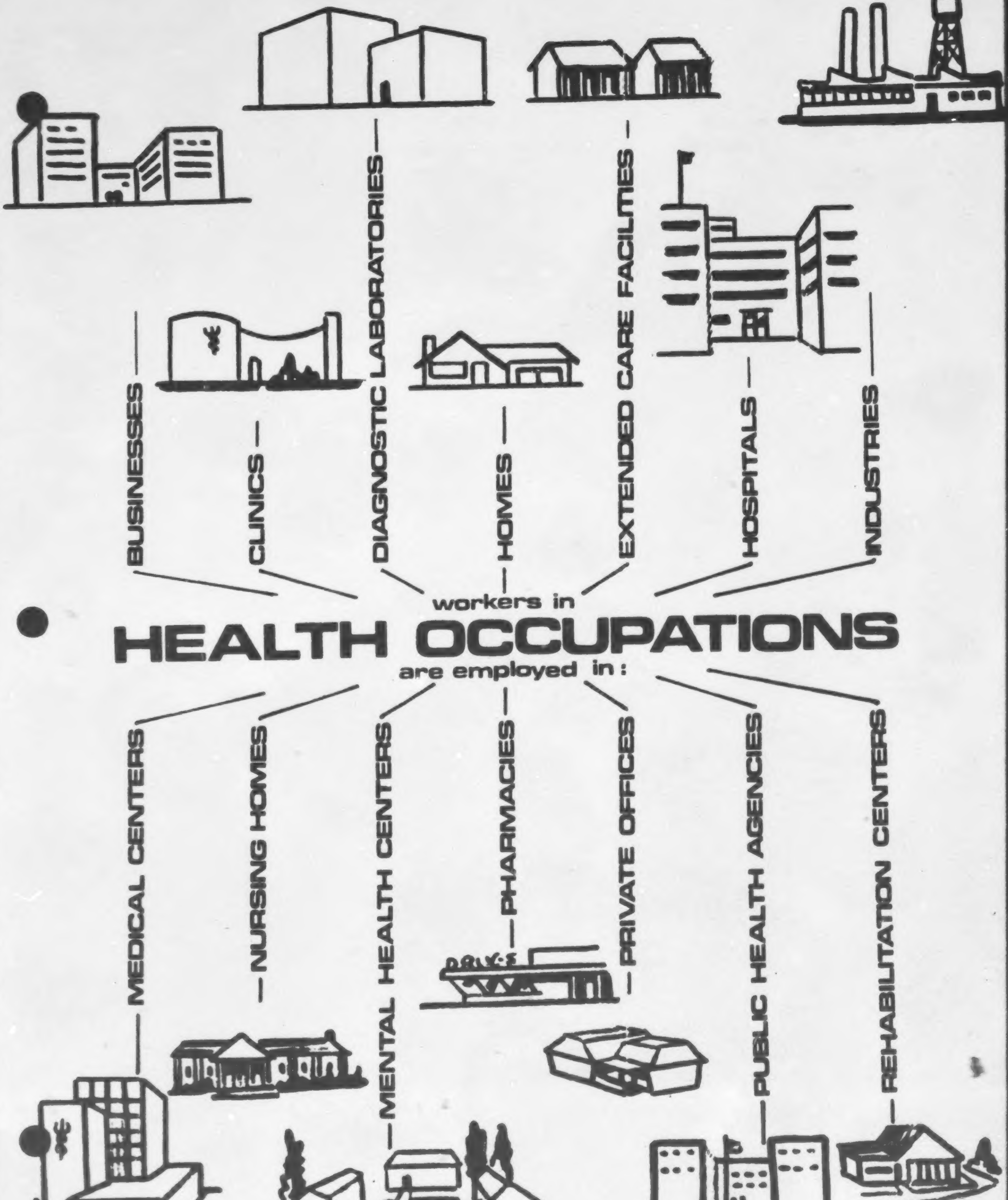
Growth of Insurance Coverage

Expansion of Medical Research

Changes in Licensing Laws



Increasing Government Expenditures


BUSINESSES
CLINICS
DIAGNOSTIC LABORATORIES
HOMES
EXTENDED CARE FACILITIES
HOSPITALS
INDUSTRIES
workers in
HEALTH OCCUPATIONS
are employed in:
MEDICAL CENTERS
NURSING HOMES
MENTAL HEALTH CENTERS
PHARMACIES
PRIVATE OFFICES
PUBLIC HEALTH AGENCIES
REHABILITATION CENTERS
DRIVE

LEARNING ACTIVITY PACKAGE 10

Category:	Health Occupations (General)
Focus:	Hospital Careers
Activity:	Field Trip/Resource Person
Objective:	At the conclusion of this lesson, the student will be able to observe and react on a student worksheet to the working conditions, duties and responsibilities, and types of health workers employed in a hospital setting.

EQUIPMENT, SUPPLIES AND FORMS

1. Field Trip Observation Form (see sample enclosed in the back of this notebook)
2. Your Comments, Please! (see sample enclosed in this learning package)
3. Hospital Exercise and Teachers Key (see sample enclosed in this learning package)

RATIONALE

The purpose of the field trip is to expose students to the health occupations found in a hospital setting. It will provide an opportunity to meet and talk with workers dealing directly and indirectly with patient care and to gain information and exposure not normally available in the classroom. The students will have an opportunity to witness the relationships between health occupations as they observe patient care on the scene.

SUGGESTED PROCEDURES

Survey the class and have the class plan what to see and do during the field trip. Help guide the planning and see that the trip covers a wide variety of interests, abilities, and training. Check with the hospital for their suggestions and recommendations. Some hospitals will allow their patients to be observed, some will not. If the hospital does not allow their patients to be observed, the field trip may visit different departments in the hospital, such as: the biomedical engineering department; the dietary, housekeeping or auxiliary services department; the public relations or social services department. Some hospitals may have slide-tape presentations which could be shown to the students during the field trip.

For each department visited, make sure that students are introduced to the workers and provide time for the workers to tell about what they do during a typical day. If certain forms or procedures are used, ask the tour guide to explain these to the students and explain the duties and responsibilities that the employees have.

Among the questions that students should ask during the field trip include: What is the purpose of the department? What are some of the services ordinarily provided by the department? What types of patients and under what conditions are workers from your department brought in to help the patient?

ALTERNATE ACTIVITIES

After the field trip, divide the students into small groups. Announce a topic and allow the group members to talk among themselves about the topic. Select the topics from information gathered during the field trip; from the student's responses to the Field Trip Observation Form; and from additional topics generated by the students in class. Develop or obtain a slide presentation about the hospital. Some hospitals have developed slide presentations as a part of their public relations program.

Name ________________________________

YOUR COMMENTS, PLEASE!

1. Did you enjoy the tour to ________________________________?

   Yes ______ No ______ Why?

2. Do you think it was worth our time to go?

   Yes ______ No ______ Why?

3. If you could go to ________________________ for a day, which person would you like to be with and assist? Why?

4. What new occupational interests do you have as a result of our tour?

5. Which people looked like they were enjoying their jobs?

6. During our tour we saw people involved in many different occupations. List some of these occupations and the duties of a person in this occupation.

7. If we could go again, what could we do better?

8. Please describe any parts of the tour that you did not understand.

9. Are you interested in a health-related career?

   Yes ______ No ______ If yes, which one?

HOSPITAL EXERCISE

Place the word in the blank which correctly completes the sentences below.

X-ray
Admitting Office
Lung
8-12
Examined
Dialysis Unit

Dietician
Bill
Emergency Room
Hospital Administration
2-5
Anesthesiologist

Laboratory
Patient Record
Heart
General
Rehabilitation
Central Service
Chief Pharmacist

1. The hospital laboratory is where tissue is__________________.
2. The hospital that treats all types of patients is known as a ___________________________________.
3. The pathologist is usually found in the____________________.
4. ______________________________is in charge of the patient food service.
5. A physical therapist assists the patient in __________________.
6. Patients whose kidneys go bad are treated in the_____________.
7. A radiologist is usually found in__________________________.
8. Constant patient care is under the supervision of a__________ __________________.
9. The physician who is responsible for putting you to sleep for surgery is a________________________________.
10. ________________________________is in charge of a hospital pharmacy.
11. All hospital supplies come from____________________________.
12. Physicians spend____________years in school.
13. Nurses spend_______________years in school.
14. Accidents are usually treated in the_______________________.
15. Cardiology studies deal with the__________________________.
16. A pulmonary care patient usually has______________________ problems.

17. The medical records department has the responsibility for all________________________________.

18. The business office has the responsibility for preparing the patient__________________________.

19. A patient is assigned to a room by the_______________________.

20. The overall function of the hospital is under the direction of the _________________________________.

HOSPITAL EXERCISE

1. Examined
2. General
3. Laboratory
4. Dietician
5. Rehabilitation
6. Dialysis Unit
7. X-Ray
8. Registered Nurse
9. Anesthesiologist
10. Chief Pharmacist
11. Central Service
12. 8-12
13. 2-5
14. Emergency Room
15. Heart
16. Lung
17. Patient Record
18. Bill
19. Admitting Office
20. Hospital Administration

LEARNING ACTIVITY PACKAGE 11

Category:	Health Occupations (General)
Focus:	Research Method
Activity:	Class Discussion/Student Activity
Objective:	At the conclusion of this lesson, the student will be able to describe on a student worksheet the procedural steps used by people in the health field to form and test a hypothesis.

EQUIPMENT, SUPPLIES, AND FORMS

1. Student copies of Research Method used in the Health Field (see sample enclosed in this learning package)

RATIONALE

The purpose of this lesson is to teach the student the research method used in the health industry. This method is a necessary foundation for the student to know and understand the meaning of the tasks and data collected in Operation MEDIC.

SUGGESTED PROCEDURES

This lesson should precede the Operation MEDIC lesson. The research method is a procedure of thinking and problem solving used by people in all scientific fields for the purpose of finding "the truth".

The steps in the research method are:

1. Define the problem
2. Collect all information
3. Form a hypothesis
4. Experiment to prove or disprove the hypothesis
5. Record the data
6. Examine the results
7. Draw a conclusion

The following sample steps for a class lesson in the research method should be utilized:

1. Find what percent of the class has normal vision.
2. Ask students what the class opinion is.
3. Form a hypothesis (scientific guess).
4. Ask the students how the hypothesis can be checked for accuracy.
5. Select one method, such as the Snelling eye test.
6. Have someone in class record data.
7. Examine the data and figure the percent of normal vision.
8. Compare the figured percent to the hypothesis.
9. Have the class draw a conclusion.
10. Discuss what other information about the people in the class could be gathered.
11. Discuss what other hypothesis could be formed.

Have the students complete Part A of the form as the lesson is given. Have the class as a group decide possibilities for Part B. Have the class quickly group into twos or threes to complete Parts C, D, and E. Allow time at the end of the hour to look over and discuss with the class Parts C, D, and E.

ALTERNATE ACTIVITY

1. Have students read Koch's Theory from a basic high school science text. Discuss the effect of the theory on modern health care.
2. Have students develop a poster depicting Koch's Theory.

Name____

RESEARCH METHOD USED IN THE HEALTH FIELD

A. The steps in the Research Method are:

1.
2.
3.
4.
5.
6.
7.

B. What type of information about the people in the class could be formed into an hypothesis? List, then give a method for testing the hypothesis.

1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

C. List occupations in the health field which use the research (scientific) method to obtain data, information, or prove a hypothesis.

1.
2.
3.
4.
5.
6.
7.
8.

D. List some of the health care advances made by workers in the health field who have used this method.

1.
2.
3.
4.
5.
6.

E. What advances are hoped for by workers who are using the method now to develop cures and improve health care?

1.
2.
3.
4.

LEARNING ACTIVITY PACKAGE 12

Category:	Health Occupations (General)
Focus:	Operation MEDIC (Medical Educational Data In Careers)
Activity:	Simulation
Objective:	At the conclusion of this lesson, the student will have gained first-hand knowledge of the tasks, skills, equipment, and working conditions in health careers, by having engaged in certain occupational activities.

EQUIPMENT, SUPPLIES, AND FORMS

1. Duties and Qualifications of Health Workers (see sample enclosed in this learning package)
2. Organizational Chart: Operation MEDIC (see sample enclosed in this learning package)
3. Shoe Sizer (from shoe store)
4. Audiometer (Beltone or Maico)
5. Scales for measuring weight
6. Tape measure for height
7. Vision screening machine (Titmus) or Snelling Eyechart, Flashlight
8. Interview and collection forms enclosed in this learning package

RATIONALE

The purpose of this activity is to give the students an opportunity to experience some of the tasks, skills, forms, and equipment used by people in health-related occupations. It gives a hands-on experience in the research method used to collect data, not otherwise available in the classroom.

SUGGESTED PROCEDURES

This lesson requires a minimum of two class days. You may wish to extend the time even further.

Operation MEDIC is a simulation of a real health care institution. In this institution there are five departments. (See organizational chart). The instructor should discuss this simulation with students and explore the departments and positions that can be held within the organization. Students should select a position at the beginning of the activity. Students should rotate positions throughout the simulation so that experience is gained in more than one department for more than one position.

See the Duties and Qualifications of Health Workers information.

Have the students select positions in the organization, with at least one half the class initially assigned as clients. After a "client" has been interviewed, he/she can select a position in one of the departments. Students who have acted in one or more positions may in turn become clients.

After all students have undergone interviews as clients, organize the class into department data teams to compile, analyze and report the accumulated data to the class as a whole. Discuss with the class the findings, the operations of the organization, and the roles they played in the simulation. Each student should be given the opportunity to comment on likes, dislikes and insights gained from each position he/she filled.

DUTIES AND QUALIFICATIONS OF HEALTH WORKERS

DIRECTOR (Administrator)

The director holds the leadership position in the MEDIC organization, and is responsible for seeing to it that MEDIC is carried out successfully. Along with this position there is much prestige, because of the great responsibility.

Duties

As the chief executive in MEDIC you will be responsible for the overall success of your institution. You will work directly with the department chiefs, the instructor, and at times, with the school health nurse. In addition to these coordinating activities, public relations functions will be a big part of your responsibilities. You must first of all see that a good job is done, and then let people know about it. This is what public relations is all about.

Qualifications

The director should be a leader who sees past the small things in MEDIC and keeps an eye on the real purpose of MEDIC: the collecting of health information on every individual. In order to do this the director must be a person who "has it all together," and must be able to command the respect of the staff and inspire them to do things well.

DATA FLOW TECHNICIAN (Medical Records Administrator)

One of the most challenging positions in MEDIC is that of data flow technician. He/She designs the whole system: 1) designs the traffic flow and determines how it will go; 2) prepares maps and charts to do the job; and 3) sees that it runs smoothly and makes improvements where necessary. If you like to stand back and see something work, and have a hand in making or designing the system, then data flow technician may be the position for you.

Duties

Your job is most important because you will be expected to design and develop the traffic flow for each department; you will have to check time requirements, traffic patterns and material usage. After designing the system, you will be expected to keep it going smoothly. If problems develop, you must be able to come up with a solution quickly. You must keep a constant check on how the system is going. You must always be willing to make changes if it will improve your design. You will need to collect records in a central place for storage, and keep the individual student records together in one file.

Qualifications

This job demands a person who likes to solve problems. You must be mechanically minded and like to work with numbers and figures. You will be something like an engineer who designs a new system or operation. Since you will have to make maps and charts, you will have to be neat and have the patience to draw very specific things. Important also will be the ability to direct people with diplomacy. People will have to follow your directions cheerfully, inspired in part by you. But probably the most important qualifications for a data flow technician are imagination and ingenuity. These qualifications are needed since it will be your job to find the best way to get the job done.

MEASURER (Audiologist, Podiatrist, Optometrist, Speech Pathologist, Physician's Assistant)

The job of measurer is a very demanding, challenging position and definitely a VIP (Very Important Person) position because the measurer has the duty of giving the specific tests that the MEDIC organization has been organized to collect. There are really three major responsibilities that the measurer must assume: 1) establish a good relationship with the examinee in order to collect the data; 2) collect the data accurately; and 3) be able to supervise the people working with him/her.

Duties

The major part of your job will be to establish a good relationship with the examinees. It will be your duty to explain what you are going to do, what they must do, and answer any questions they might ask. You will have to act much like a doctor in this case to explain and reassure the examinee about the nature of your tests.

The second part of your job is to collect the necessary data. This will require that you position the client correctly and record the data accurately. Accuracy is very important in your job since an error may be serious. You will have to have some technical knowledge in order to collect this data.

The third part of your job is to act as supervisor. You will have one or more assistant measurers under your direction. You will have to establish a good working relationship so that you will all work as a team and get the job done in the best way possible.

Qualifications

From the job description above, it is clear that to be successful, you must like people, get along well with them, and talk to them easily. You should have the ability to make people relax and find confidence in you; you should have the attitude of a professional. You should be able to think and act quickly in case the unexpected happens. Since you are a supervisor, you should also be diplomatic and inspire your staff to do a good job.

Add to this list of qualifications the need to be accurate and neat. An interest in science and mathematics is to your advantage, since you will be giving tests oriented in that direction. Top all these requirements with responsibility and hard work.

ASSISTANT MEASURER (Audiologist Assistant, Podiatrist Assistant, Practical Nurse, Optometrist Assistant, Speech Pathologist Assistant)

The assistant measurer works under the direction of the measurer and may be called upon to do many different tasks, depending upon the needs of the measurer. For example, an assistant measurer may get the examinee ready for the test, help give the test or run errands.

Duties

It will be your job to position the examinee for the tests. At times you may be called upon to talk with and reassure the examinee as the test is being given or while waiting. Another important part of your job is to arrange and maintain the equipment so that it will be ready for the next test. It will also be your job to remain on hand so that you can help the measurer at all times. You and the measurer will become a team in performing the various tests. You must like people and be able to get along well with them. Since you will be called upon to reassure the examinee and answer questions, you must have the ability to gain the confidence of people. Important also will be your ability to take orders and follow directions. Along with this you should not mind working hard and with enthusiasm. Since you will also be handling important data you should be a neat, accurate, and conscientious person.

INTERVIEWER (Medical Records Technician, Medical Receptionist, Medical Assistant)

First impressions always seem to mean so much, so the position of interviewer is important. The interviewer is the first person an examinee meets when entering a department. The interviewer's job consists of greeting each person, putting them at ease, and asking them the necessary questions to get the facts. The interviewer is the one who sets the mood for the whole procedure, always remaining friendly, enthusiastic, but businesslike.

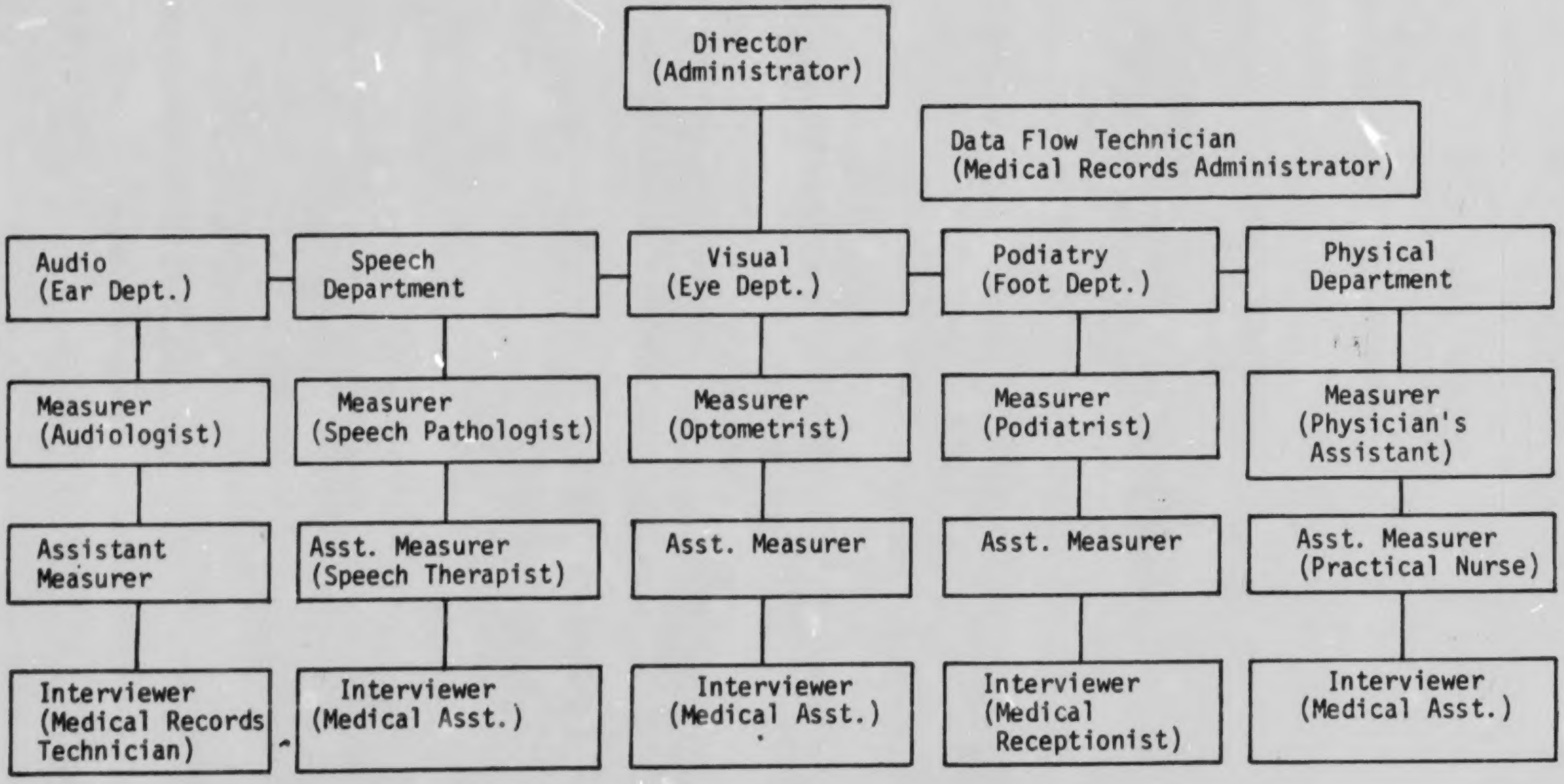
Duties

Your main task as an interviewer is to get the facts from each individual concerning their health background. You must remain calm, tactful and in control of the situation at all times. It will be your duty to be observant and try to take away any doubts the examinee may have. Along with gathering the necessary information, you must keep an accurate head count tally so that the department chief and the data flow technician will know how many examinees have come through the department. Acting as a receptionist is also part of your job. To do this, you must greet everyone with a friendly smile and make sure that those waiting are comfortable.

Qualifications

As an interviewer you will be dealing directly with all kinds of people; you must really like people and have the ability to talk to strangers and gain their confidence. Knowing something about health science will also help you do this job better. Add to this list of qualifications, neatness, accuracy, and a happy disposition. You may be faced with problems that you will have to handle yourself. Because you will be gathering personal information, you must be the type of person who will honor other people's privacy; you must practice professional ethics in this job. Being an interviewer isn't easy; you must be willing to work hard and with enthusiasm.

ORGANIZATIONAL CHART: OPERATION MEDIC



FOOT DATA INTERVIEW FORM

(Completed by Interviewer)

Student's Name________________________________ Date______________
(Last) (First) (Initial)

Age:________________ Sex: M F
(circle one)

Name of School:____

Grade Level: K 1 2 3 4 5 6 7 8 9 10 11 12
(circle one)

Interview Questions

1. How long ago did you have your feet checked:

   6 months______ 1 Year ______ 2 Years ______ Other________

2. Do you regularly have your feet checked? Yes______ No ______
3. Do you wear corrective shoes? Yes______ No ______
4. Have you ever had a serious foot injury? Yes______ No ______
5. Do you suffer from blisters? Never_____ Occasionally_____ Often _____
6. Do your feet ever hurt? Yes_____ No _____

   If yes, explain.

FOOT DATA COLLECTION FORM

(Completed by Measurer or Assistant)

FOOT TEST DATA

1. Right Foot: Length____________ Width______________
   Left Foot: Length____________ Width______________
2. Are both feet the same size? Yes__________ No__________
3. Does the student exhibit any obvious foot problems such as corns or blisters?

   Yes____________ No ____________

AUDIO DATA INTERVIEW FORM

(Completed by Interviewer)

Student's Name____Date____________________

Age: __________________ Sex: M F (circle one) Date of Birth:______________

Name of School:___________________________________Grade Level: K 1 2 3 4 5 6 7 8 9 10 11 (circle one)

1. How long has it been since you had your hearing checked?

   6 months______ 1 Yr.______ 2 Yr.______ 3 Yr.______ Other______

2. Do you have your hearing checked regularly? Yes______ No______
   If so, how often?

   Once a year______ Once every two years______ Once every three years______

   Other ______

3. How long has it been since you last visited an ear doctor?

   6 months______ 1 Yr.______ 2 Yr. ______ 3 Yr.______ Other______

4. Have you ever had an ear infection? Yes______ No ______

   If so, when?__________

5. Have you ever had earaches? Yes______ No______

   If so, how regularly (circle one)? Never Occasionally Often

6. Have you had your tonsils removed? Yes______ No______
   If so, how long ago did you have the operation?

   1 Yr. ______ 2 Yr.______ 3 Yr.______ 4 Yr.______ Other______

7. Do you suffer from motion sickness? Yes______ No______
   What activity (ies) cause you to get sick? Riding in a car______
   Riding in a plane______ Swinging______ Watching moving objects______
   Other______________________________

8. In what situation do you hear better? A noisy place_____ a quiet place_____

AUDIO DATA COLLECTION FORM

(Completed by Measurer or Assistant)

Perceptual Thresholds Data

1. Did the examinee hear the sound source within the limits established for normal hearing?

Right Ear			Left Ear		
Trail 1:	Yes______	No______	Trail 1:	Yes______	No______
Trail 2:	Yes______	No______	Trail 2:	Yes______	No______
Trail 3:	Yes______	No______	Trail 3:	Yes______	No______
Trail 4:	Yes______	No______	Trail 4:	Yes______	No______
Trail 5:	Yes______	No______	Trail 5:	Yes______	No______

Data on the Inner Ear

Pass-Pointing:

Can the examinee touch his/her nose with the top of his/her right index finger on the first try with eyes closed? Yes______ No______

With his/her eyes still closed, can the examinee return his/her right index finger to its original position (i.e. to the tip of the measurer's left index finger) on the first try? Yes_______ No________

If not, where was the examinee's finger in relation to the measurer's finger? To the right______ To the Left______ Above______Below______
(check no more than two)

Can the examinee touch his/her nose with the tip of his/her left index finger on the first try with eyes closed? Yes______ No______

With his/her eyes still closed, can the examinee return his/her left index finger to its original position (i.e. to the top of the measurer's right index finger) on the first try? Yes______ No______

If not, where was the examinee's finger in relation to the measurer's finger?
To the right______ To the left______ Above______ Below______
(check no more than two)

VISUAL DATA INTERVIEW FORM

(Completed by Interviewer)

Student's Name:____Date:________________

Age:________________ Sex: M F (circle one) Name of School______________________

Grade Level: K 1 2 3 4 5 6 7 8 9 10 11 12 (circle one)

Interview Questions

1. How long ago did you have your eyes checked?

   6 months______ 1 year______ 2 years______ Other_______

2. Do you have your eyes checked regularly? Once every two years______ Once every three years______ Other______

3. How long has it been since you last visited an eye doctor?

   6 months______ 1 year______ 2 years______ Other______

4. Do you wear corrective lenses? Yes______ No______

   If so, which? Glasses______ Contact Lenses______

5. If you do wear glasses or contact lenses, how many years have you worn them?

   Less than 1 year______; 1 2 3 4 5 6 6 8 9 10 11 12 13 14 15 (circle one)

6. Do your eyes ever hurt? Yes______ No______

   If so, explain.

7. Do you ever have trouble telling the difference between colors?

   Yes______ No______ If so, explain.

VISUAL DATA COLLECTION FORM
(Completed by Measurer or Assistant)

Visual Data

1. Color of eyes: Brown Blue Green Hazel

2. Are the diameters of the examinees pupils equal?_____ different?_____

3. Do the examinee's pupils contract in the presence of a bright light?

   Yes_____ No_____

4. Do the examinee's pupils contract independently in the presence of a bright light?

   Yes_____ No_____

5. Is there crusty matter around the eyelashes of the examinee?

   Yes_____ No_____

Acuity Test Data

1. Record data in appropriate space.

   Right eye 20/

   Left eye 20/

   Did the examinee squint during the test?

   Yes_____ No_____

   Was the examinee "wide-eyed" during the test?

   Yes_____ No_____

SPEECH DATA INTERVIEW FORM

(Completed by Measurer or Assistant)

Student's Name:______________________________ Date:__________

Age:________ Sex: M F (circle one) Date of Birth:________________

Name of School:______________________ Grade:________________

1. Do you feel you have a speech problem? Yes______ No______

2. If so, when was it first noticed?________________________

3. Have you had previous speech therapy? Yes______ No______

4. Is there a foreign language spoken in your home? Yes______ No______

5. Have you ever had your tongue "clipped"? Yes______ No______

6. Have you ever worn braces on your teeth? Yes______ No______

Have the Examinee Read the Following Aloud

"Bob and Paula were playing baseball on the highway. When he was running after the ball, Bob dashed in front of a car and was slightly injured. Paula called a police officer, and Bob was taken to the hospital. He had cuts on his arms and legs but, fortunately, no bones were broken. He went home the following day and was able to take part in his usual activities in a short time."

Voice Data

Did the examinee read the above paragraph with a voice that seemed high?_____ low?_____ normal?_____

Rhythm Data

Did the examinee read the above paragraph in a rhythm that appeared irregular?_____ normal?_____

PHYSICAL DATA INTERVIEW FORM

(Completed by Interviewer)

Student's Name:________________________________ Date:____________

Age:__________ Sex: M F (circle one) Name of School:____________________

Grade Level: K 1 2 3 4 5 6 7 8 9 10 11 12 (circle one)

INTERVIEW QUESTIONS

1. When was your last physical examination?________________________

2. What was the overall condition of your health at that time?

   Excellent______ Good_____ Fair_____ Poor_____ If "fair" or "poor", give details:

   ____

   ____

3. Do you smoke? Yes_____ No_____ How much?________________
   How many years?________________

4. Is there any family history of heart trouble? Yes_____ No_____

5. If "yes" to answer #4, give which member and what was the problem?

   Members:______________________Problem:________________

   ______________________ ________________

   ______________________ ________________

6. How physically active are you each day?

   Extremely____ Moderately____ Average____ Limited____ Inactive____

7. How often do you exercise?________________How long a time:________

PHYSICAL DATA COLLECTION

(Completed by Measurer or Assistant)

1. Height________________

2. Weight________________

LEARNING ACTIVITY PACKAGE 13

Category:	Medical, Dental, and Nursing Occupations
Focus:	Medical Doctor
Activity:	Resource Person
Objective:	At the conclusion of this lesson, the student will be able to describe on a student worksheet: at least five medical specialties, some of the tasks performed in each specialty area, and the educational requirements and working conditions of a medical doctor.

EQUIPMENT, SUPPLIES, AND FORMS

1. Resource Person Information Sheet (see sample included in back of this notebook)
2. Levels of Preparation for the Medical Doctor (see sample enclosed in this learning package)
3. Types of Medical Doctors (see sample enclosed in this learning package)
4. Medical Word Matching Game (see sample enclosed in this learning package)

RATIONALE

The purpose of this activity is to expose students to types and levels of medical doctors. It provides students with an opportunity to meet and talk with someone dealing directly with the field, and gain information and exposure not normally available in the classroom.

SUGGESTED PROCEDURES

Some of the best resource persons for this lesson include: medical school admissions counselor; medical clinic administrator; university medical instructor, and medical students. Due to emergencies and heavy advanced scheduling it is difficult to get a medical doctor as a speaker; it is usually necessary to ask a month in advance and also plan for a possible alternative.

Before the resource person comes to speak to the class, have the students read the information sheet titled, "Levels of Preparation for the Medical Doctor." Then distribute the Types of Medical Doctors information sheet and the word matching exercise. Make sure that students understand the areas of specialization within the medical field. If necessary, refer to Learning Activity Package 5: Introduction to Medical Terminology. The purpose of these exercises and student information sheets is to give students enough grounding in the field so that they are able to utilize the resource person to the fullest extent possible.

ALTERNATE ACTIVITIES

1. Divide the class into groups of four or five students. Using a telephone book, have each group make a master list of the type and number of medical doctors in the community. Using the medical dictionary when necessary, the students are to explain, in writing, what each specialist does. If there are five or more of one type, the group is to give a reason as to why so many of one type are located in the community. Pass out the master list of medical specialties so the group can discuss which types are not in the community and speculate as to why this is so.
2. Show one or both of the following free films: The Heritage Of Operation Room "D", #4719; Parke, Davis and Company (27 1/2 minutes) and The Hospital, The Surgeon, And You, #30704; American College of Surgeons (14 minutes). Available from: Modern Talking Picture Service, Inc., 1212 Avenue of the Americas, New York, NY 10036.
3. Instruct students to select two or three of the specialties from the Types of Medical Doctors list and to design a symbol and/or crest which would represent that physician's specialty.

LEVELS OF PREPARATION FOR THE MEDICAL DOCTOR

There are four basic levels of preparation for medical doctors: Intern; Resident; General Practitioner; and Specialist. In general, medical personnel are responsible for deciding on the treatment each patient will receive. In most hospitals there are doctors, residents, interns, and sometimes medical students.

In order to practice medicine, a doctor must have graduated from college, completed four-year course in medical school, and spent a year as an intern working at a hospital. After this, he/she may be licensed to practice general medicine by passing a state board examination. If he/she wishes to specialize in some particular field of medicine, he/she must spend an additional one to five years at a hospital as a resident. During residency, the doctor studies and practices only in the particular field he/she has chosen. He/she then becomes licensed to practice medicine in that specialty by passing another examination given by the state.

The care of all private patients is assumed by attending physicians, that is, by licensed doctors who are either general practitioners or specialists.

A medical specialty is a branch of knowledge concerning a certain part of the body and its diseases, conditions, and treatments. A medical specialist is a doctor who devotes himself/herself to a single branch of medical knowledge. You will hear medical specialties referred to in conversations by doctors and nurses.

Following is a list of the types of medical specialties:

Allergy
Anesthesiology
Cardiovascular Diseases
Dermatology
Family Practice
Gastroenterology
General Practice
General Surgery
Gynecology
Internal Medicine
Neurological Surgery
Neurology
Obstetrics
Ophthalmology
Otolaryngology
Pathology
Pediatrics
Physical Medicine and Rehabilitation
Plastic Surgery
Psychiatry
Radiology
Therapeutic Radiology
Theractic Surgery
Urology

TYPES OF MEDICAL DOCTORS

Allergist:	Sub-specialty of internal medicine; diagnoses and treats body reactions resulting from unusual sensitivity to foods, pollens, dusts, medicines, or other substances.
Anesthesiologist:	Administers various forms of anesthesia in operations or diagnoses cause of loss of feeling or sensation.
Cardiologist:	Sub-specialty of internal medicine; diagnoses and treats disease of the heart and blood vessels.
Dermatologist:	Diagnoses and treats diseases of the skin.
Family Practitioner:	Diagnoses and treats patients by both medical and surgical methods; emphasis is on special training in office practice care, hereditary problems, and patient and family reaction to illness.
Gastroenterologist:	Sub-specialty of internal medicine; diagnoses and treats digestive tract disorders.
General Practitioner:	Diagnoses and treats disease by both medical and surgical methods without limitation to organ systems, body regions, or age of patients.
Surgeon:	Diagnoses and treats disease by surgical means, without limitation to organ systems or body regions.
Gynecologist:	Diagnoses and treats disease of female reproductive organs.
Internist:	Diagnoses and treats illnesses without using surgery.
Neurosurgeon:	Diagnoses and surgically treats brain, spinal cord, and nerve disorders.
Obstetrician:	Cares and treats women during pregnancy, childbirth, and post-childbirth intervals.
Ophthalmologist:	Diagnoses and treats diseases of the ear, nose, and throat.
Otolaryngologist:	Diagnoses and treats diseases of ear the ear, nose, and throat.
Pathologist:	Conducts laboratory studies and interprets changes in organs, tissues, and cells as well as alterations in body chemistry.

Pediatrician:	Prevents, diagnoses and treats children's diseases.
Physiatrist:	Diagnoses disease of injury in the various systems and areas of the body; treats convalescent or physically handicapped people by means of physical procedures.
Plastic Surgeon:	Performs corrective or reparative surgery to restore deformed or multilated parts of the body.
Psychiatrist:	Diagnoses and treats mental disorders.
Radiologist:	Uses radiant energy (x-rays, radium, cobalt 60, etc.) in the diagnosis and treatment of disease.
Thoracic Surgeon:	Performs operative treatment of lungs, heart, or large blood vessels within the chest cavity.
Urologist:	Diagnoses and treats diseases or disorders of the kidneys, bladder, ureters, urethra, and the male reproductive organs.

MEDICAL WORD MATCHING GAME

Instructions: Match the words in Column II to the type of medical doctor who would most likely deal with the words.

	Column I		Column II
____1.	Allergist	A.	Pregnancy
____2.	Anesthesiologist	B.	Emotional and mental disorders
____3.	Cardiologist	C.	Hay fever
____4.	Chest (Thoracic) Specialist	D.	Urinary tract
____5.	Dermatologist	E.	Eyes
____6.	Internist	F.	Heart
____7.	Surgeon	G.	X-ray
____8.	Neurologist	H.	Loss of sensation
____9.	Obstetrician	I.	Internal organs
____10.	Gynecologist	J.	Lungs
____11.	Ophthalmologist	K.	Operations
____12.	Pathologist	L.	Children
____13.	Pediatrician	M.	Nervous system
____14.	Psychiatrist	N.	Malformations
____15.	Plastic Surgeon	O.	Female reproductive system
____16.	Radiologist	P.	Body tissue, blood
____17.	Urologist	Q.	Skin, hair, nails

LEARNING ACTIVITY PACKAGE 14

Category:	Medical, Dental, and Nursing Occupations
Focus:	Dental Careers
Activity:	Game/Resource Person
Objective:	At the conclusion of this lesson, the student will be able to identify various careers in dentistry.

EQUIPMENT, SUPPLIES, AND FORMS

1. Careers in Dentistry (see sample enclosed in this learning package)
2. Resource Person Information Sheet (see sample enclosed in the back of this notebook)
3. Game instructions for What's My Career? (see sample enclosed in this learning package)

RATIONALE

The purpose of this lesson is to provide students with an overview of the dentistry field. It gives the students an opportunity to gain information about the types and the scope of occupations in dentistry. If a resource person is also used, it will provide students with an opportunity to experience, by demonstration, the tasks, skills, forms, and equipment used by a person on the job.

SUGGESTED PROCEDURES

On the first day, have the students play the "What's My Career" game. On the second day, have a resource person discuss dental careers with the students. Have the students use the suggested interview information sheet. If time permits only one of these, either one can be used for a general understanding of the field of dentistry. Using both lessons will give more depth of understanding and exposure.

Some of the best resource persons are dental assistants and dental hygienists, preferably someone recommended or arranged for by students themselves.

ALTERNATE ACTIVITIES

1. Check with the local dental association or society to see if there is a slide/tape presentation available on dental careers.
2. If there is a free dental clinic in the area, arrange a field trip where all students in the class can get their teeth checked or see care being given and having the procedure explained.

GAME INSTRUCTIONS FOR "WHAT'S MY CAREER"

This is a game using closed-end questions to help match a description of a job to the job itself. The objective of the game is to correctly identify job titles. In doing so, students collect points toward a team total. The team with the highest point total wins.

Instructions:

1. Select six students to role-play workers in the field of dentistry.
2. Select a scorekeeper and a judge to monitor the game and to total the scores.
3. Divide the class into two teams. Each person is to have a pencil and sheets of paper numbered from 1 to 6. Chairs are to be set in two rows for the teams. A chair for the person who will be questioned should be placed at the head of the rows or front of the room.
4. The six students are to decide which roles they will play. Refer to "Careers in Dentistry" information sheet to make the role selection.
5. The person being interviewed can respond: "yes", "no", "maybe", or "sometimes". The person being interviewed will need to study the dental career he/she decided to role-play very carefully so that the answers to the questions will be correct.
6. Each team alternates questioning the person; each team member may ask only one question of the person. Both teams are allowed to hear all the questions and the answers.
7. At the end of the questioning, each member of both teams is to write the name of the career that he/she thinks the person has been role-playing. Team members may not talk or share ideas or information.
8. The procedure is repeated for each of the six students who are role-playing.
9. The scorekeeper and the judge are to collect the papers and tally the score to see which team wins.
10. To increase difficulty, have three of the careers from the field of dentistry, and the other three from other fields in the health cluster.

CAREERS IN DENTISTRY

Careers in dentistry offer many opportunities in a variety of challenging and rewarding endeavors. As a general practitioner, the dentist is responsible for the total oral health of the patients who seek his/her services.

GENERAL DENTIST

Today's dentist must prepare himself/herself academically for a wide variety of cases. The academic discipline usually consists of normal high school preparatory courses, two to four years of college courses keyed to areas of special need, and a four-year course at an accredited school of dentistry.

Dentistry is both an art and a science. As such, it requires ability and training in both phases. As a scientist, the dentist is well schooled in such areas as math, chemistry, physics, and the biologic sciences.

The dental school course of study includes science courses in anatomy, microanatomy, pathology, bacteriology, pharmacology, physiology, biochemistry, and embryology. In addition, more specialized courses are required in periodontics, orthodontics, oral diagnosis, and surgery, radiology, internal medicine, and oral pathology.

As an undergraduate, the prospective dental student should also prepare in other disciplines such as liberal arts. This phase of dentistry involves understanding people and their problems. The dentist must be capable of this understanding in order to educate and motivate patients in their own home care programs of preventive hygiene. Understanding and communicating with patients also enables the dentist to explain and guide the patient toward necessary treatment. In addition, the elimination of anxiety in dental treatment procedures is brought about by the ability of the dentist to understand people.

The general dentist is responsible for examining and diagnosing the patient's state of oral health, and knowing the treatment to be performed to correct any abnormalities. This treatment may include referring the patient to a dental specialist for treatment of a specific problem.

ORAL SURGEON

Treatment rendered by the oral surgeon includes extraction of teeth, removal of tumors and cysts, correction of congenital deformities and surgical treatment of defects inflicted by accidents. The oral surgeon is trained as a dentist with an additional three years of specialty training during which time experience is gained in the fields of abnormal anesthesia, surgery, and related fields.

ENDODONTIST

As a specialty, endodontia entails the surgical treatment of that portion of the teeth which has become infected or diseased. Generally this involves removal of the vital portions of the tooth (dental pulp) and treatment of infections around the root of the teeth. The necessary skills of the endodontist usually require an additional two to three years of training after dental school.

ORTHODONTIST

This specialty requires an additional two to three years of study after dental school. During this time the dentist is trained in the diagnosis and treatment of problems relating to movement of teeth to correct abnormalities. In diagnosing problems, the orthodontist must be aware of skeletal growth and development and other dental considerations. He/she then plans treatment designed to correct such problems as crowding of teeth, spacing, occlusion and esthetics.

PERIODONTIST

The periodontist treats dental problems relating to the structures surrounding and supporting the teeth, such as soft tissue (gums) and bone support. He/she is skilled in the various surgical techniques and also in the correction of bite deficiencies, or equilibration of the bite, which may cause harmful effects to the supporting structures of the teeth. Another area of periodontal treatment may involve tissue grafting procedures around the roots of infected teeth. The periodontist counsels patients on home care procedures necessary to maintain oral health through proper nutrition and careful cleaning on a regular basis.

PEDODONTIST

Performing routine dental procedures on children is the specialty of the pedodontist. Post-dental school training involves analysis of growth and developmental factors, diagnosis and treatment, patient education and prevention. The pedodontist works with parents and other dentists to achieve proper oral health.

PROSTHODONTIST

This specialty involves the replacement of teeth lost due to disease, accident, or congenital defects. The prosthodontist evaluates the complete oral cavity before deciding which treatments are to be used. He/she replaces any or all of the missing teeth with a variety of materials and appliances, the end result of which is function, esthetics and patient comfort.

DENTAL EDUCATOR

Some dentists, both generalists and specialists, remain in the academic environment as professors in dental schools. Both clinical and classroom work are utilized in this process.

DENTAL RESEARCHER

The field of dental research involves many disciplines. The generalist or specialist conducts research involving many aspects of dental science in order to develop new techniques and materials.

DENTAL HYGIENIST

The dental hygienist is trained in the specific field of oral hygiene. This training usually involves two or three years of post-high school training, both clinical and academic. The main duties of the dental hygienist is patient education in oral hygiene, the cause of dental disease, and home care designed to prevent oral disease. The hygienist also cleans the patient's teeth and monitors the effectiveness of home care programs by a system of routine check-ups and reinforcement of oral hygiene instructions when necessary.

DENTAL ASSISTANT

Most dental assistant training programs require one year of school after high school. Some dental assistants are trained by the dentist on the job. The dental assistant functions as an extra pair of hands for the dentist, and is trained to manipulate the various materials used in dental procedures. In addition, the dental assistant knows the names and uses of many instruments and passes them to the dentist throughout the procedures. The dental assistant is also trained in sterilizing instruments, processing X-Rays, and in some cases, functioning as a receptionist.

DENTAL OFFICE MANAGER

The office manager is the first contact the patient has with the dental office. The dental office manager's duties include answering the phone, scheduling the day's appointments and other office functions. The dental office manager is trained in routine bookkeeping procedures and in some cases has had experience as a dental assistant. He or she also keeps medical records filed properly, types correspondence, and handles insurance forms.

DENTAL LABORATORY TECHNICIAN

Working from the written work orders of the dentist, the lab technician fabricates a wide variety of dental appliances. The dental lab technician works with such materials as gold, porcelain and plastic to construct crowns, dentures, bridgework, and other devices used to replace or restore teeth.

LEARNING ACTIVITY PACKAGE 15

Category:	Medical, Dental, and Nursing Occupations
Focus:	Nursing
Activity:	Class Discussion/Field Trip
Objective:	At the conclusion of this lesson, the student will be able to demonstrate, by filling out the Field Trip Observation Form, an awareness of the various nursing occupations, i.e. Licensed Practical Nurse, Registered Nurse, and Assistant.

EQUIPMENT, SUPPLIES, AND FORMS

1. Nursing Specialty Descriptions (see sample enclosed in this learning package)
2. Career Ladder for Professional Nursing (see sample enclosed in this learning package)
3. A Career in Nursing (see sample enclosed in this learning package)
4. Field Trip Observation Form (see sample included in the back of this notebook)

RATIONALE

The purpose of this field trip is to expose students to the training, qualifications and education requirements needed in the nursing field. It provides students with an opportunity to meet and talk with someone dealing directly with preparation of workers in nursing and to gain information and exposure not normally available in the classroom.

SUGGESTED PROCEDURES

A field trip will provide the best method of presenting different programs to the students. The way in which people become nurses varies from location to location, and is in the process of change everywhere. The director or instructor of practical or professional nursing programs are the best resources for presenting this information in an understandable method.

Before the field trip, have the students review the information sheets included with this lesson: Nursing Specialty Descriptions, A Career in Nursing, and The Career Ladder for Professional Nursing. Use the following questions for a class discussion prior to the field trip:

1. How would you define a "nurse"?
2. Give five qualifications required to be a nurse.
3. What are five nursing specialties?
4. Where would each of these specialties be employed?
5. What are the specific requirements for each specialty?
6. What formal preparation is needed for each specialty?
7. In the next 10 years nursing careers are predicted to____________.
8. The number of nursing jobs increased in the 70's because of____________.

NURSING SPECIALTY DESCRIPTIONS

Anesthetist:	Administers intravenous, spinal, and other anesthetics; positions patients during anesthesia; administers oxygen or other emergency procedures; informs physicians of patient condition during the anesthesia; records patient pre-operation, operation and post-operation condition, medicine administered and related data; gives post-operative care.
Industrial:	Provides care to employees in industry; promotes employee health; treats minor illnesses; provides needed nursing care; arranges further medical care; provides health counseling; administers health examinations, inoculations, and first aid.
Instructor:	Instructs student nurses; gives classroom instruction, demonstrations and supervision.
Office:	Cares for and treats patients in office; prepares patient for examination; administers injections and dresses wounds; assists with emergency and minor surgery; keeps records of vital statistics and pertinent patient data; cleans and sterilizes instruments and equipment; maintains stock supplies; may act as a receptionist.
Psychiatric:	Works with patients with mental or emotional disorders in hospitals, homes, mental hospitals, and sanitariums.
Public Health:	Cares for patients in clinics; gives inoculations, examinations, dietary education, immunization, first aid treatment; participates in community health education programs; and instructs in proper baby care.
School:	Supervises student clinic; gives inoculations and examinations; investigates school epidemics; treats minor cuts and injuries; and keeps health records for school.
Midwife:	Assumes responsibility in caring for apparently normal obstetrical patients during pregnancy, labor, delivery and postnatal period; obtains medical care for emergency and abnormal maternity cases; cooperates with public health, medical and welfare workers in securing improved care for infants and maternity patients.
Obstetrical:	Assists the obstetrician in the care of patients during the prenatal, natal and post-natal period; administers medication routine prescribed by the doctor; keeps patient records; maintains supplies and equipment in a ready, sterile condition.

Surgical:	Assists the surgeon or obstetrician in surgeries and deliveries by handing instruments, supplies, and equipment to doctor in order of use; may assist with maintenance of sterile conditions of equipment and operating room and preparation of room and patient prior to surgery.
Vocational Rehabilitation:	Works in cooperation with industrial and rehabilitation nurses in the vocational redirection of individuals whose previous vocational abilities have been impaired.

A CAREER IN NURSING

Formal Preparation

For RN programs: A high school diploma is required for entrance. The student should take math, science, and chemistry.

Nurse Assistant, LPN: In some communities this training is also available while in high school. Training is also available in adult education programs, community colleges, hospitals, and technical schools.

RN, Associate Degree: Requires two years community college; junior college, or technical schools.

RN, Professional Nurse: Requires a three-year hospital diploma, or four-year college or university program.

Employment Opportunities

The employment outlook is good for all levels of nursing. For nurses who gain an education beyond the Bachelors degree, the outlook is excellent for obtaining positions as administrators, teachers, clinical specialists, public health nurses, and research workers.

Principle factors causing the increase in demand for nurses are:

1. Rising population
2. Improved economic status of the population
3. Extension of prepayment programs for hospitalization and medical care.
4. Medicare and Medicaid
5. Expansion of medical services as a result of new medical techniques.
6. Increased interest in preventive medicine.
7. Increased interest in rehabilitation of the handicapped.

Income

The average starting salary for a Registered Nurse is quite good with additional pay after qualifying for a specialty. Obtain the salary scale for RN's and PN's from your local hospital, nursing home or clinic. Nurses Aides usually start at a minimum hourly wage or above.

General Responsibilities And Duties

Administer medicine and drugs; observe symptoms; take and record temperatures, pulses and respiration; change dressings on wounds; prepare and sterilize instruments; give injections; keep patient records: assist in the education of the patient; coordinate the care of the patient; and provide an environment which promotes the optimum level of wellness.

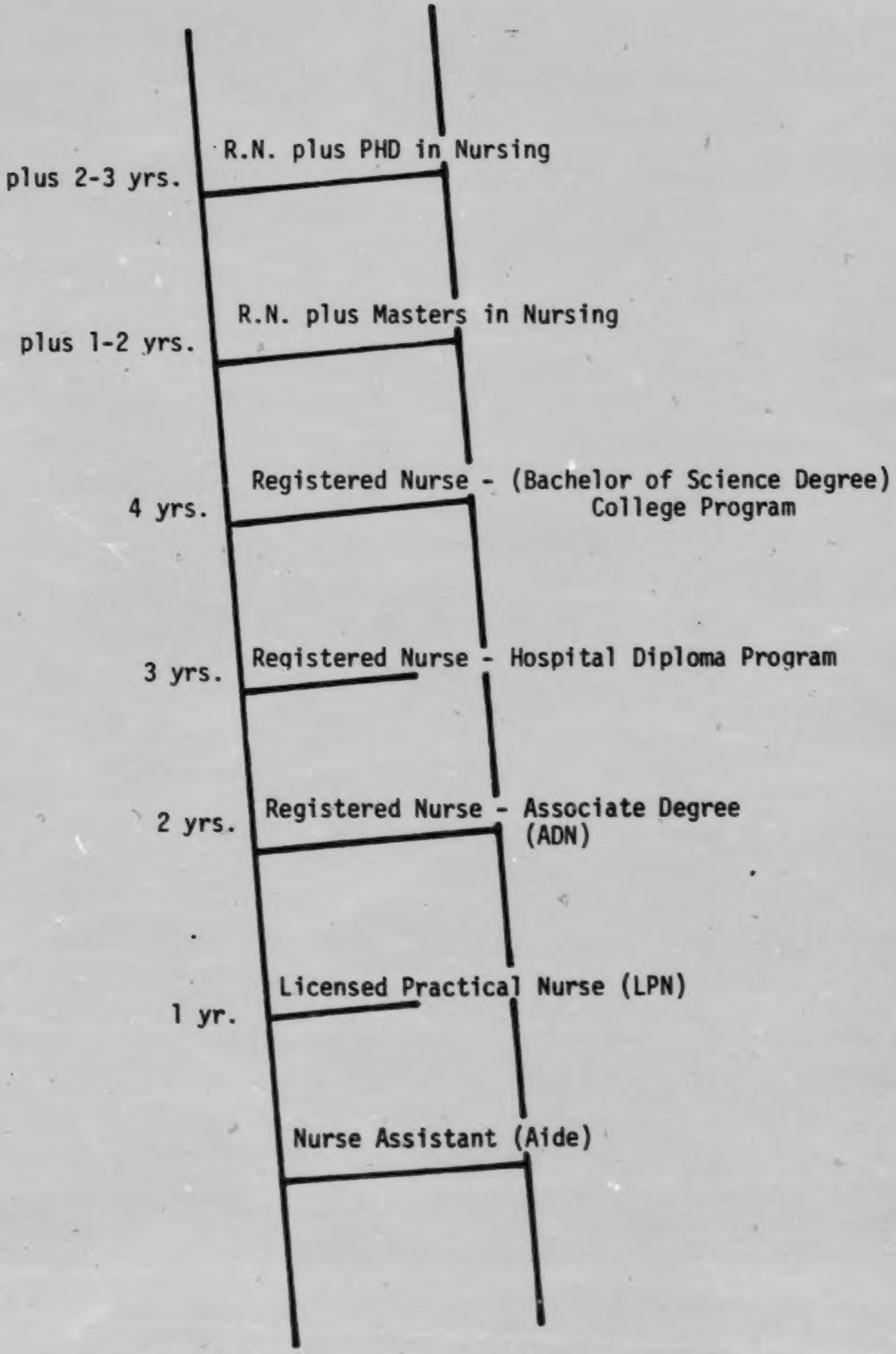
Work Places

- Hospitals
- Industry
- Doctor's offices
- Government agencies
- Schools and universities
- Clinics
- Institutions
- Private duty in hospitals or homes
- Armed forces

Nursing Specialties

- Anesthetist
- Industrial Nurse
- Instructor
- Geriatric Nurse
- Midwife
- Obstetrical Nurse
- Office Nurse
- Pediatric Nurse
- Psychiatric Nurse
- Vocational Rehabilitation Nurse
- Public Health Nurse
- School Nurse
- Surgical Nurse

CAREER LADDER FOR PROFESSIONAL NURSING


R.N. plus PHD in Nursing
plus 2-3 yrs.
R.N. plus Masters in Nursing
plus 1-2 yrs.
Registered Nurse - (Bachelor of Science Degree) College Program
4 yrs.
Registered Nurse - Hospital Diploma Program
3 yrs.
Registered Nurse - Associate Degree (ADN)
2 yrs.
Licensed Practical Nurse (LPN)
1 yr.
Nurse Assistant (Aide)

LEARNING ACTIVITY PACKAGE 16

Category:	Medical, Dental, and Nursing Occupations
Focus:	Aide and Assistant Level Careers
Activity:	Student Exercises
Objective:	At the conclusion of this lesson, the student will be able to describe on a worksheet a list of tasks for a set of aide or assistant level careers.

EQUIPMENT, SUPPLIES, AND FORMS

1. Aide and Assistant Level Health Careers Task List (see sample enclosed in this learning package)

RATIONALE

The purpose of this activity is to have students focus on the tasks required of health workers. Aide and assistant level careers were selected to: 1) emphasize the number and types of jobs available at the aide/assistant level, 2) provide the types of tasks simple enough in detail to be easily recorded, 3) provide tasks that students have had experience observing, and 4) provide the students with a verbal format for expressing what they observe.

SUGGESTED PROCEDURES

At first this lesson appears to be very elementary; but the students are probably not used to thinking about jobs in terms of specific tasks performed. This lesson provides an opportunity for students to focus their thinking in this way. By viewing jobs as a series of tasks to be performed, the students can learn to be better observers on future class field trips or when observing workers in particular occupations. In future lessons, the students can refer to and use the Aide and Assistant Level Careers Task List when they are assigned to describe the job being done by health workers they observe.

Each student will be responsible for listing 12 tasks for each of the aide or assistant level careers assigned. When working on the task list, the student should first list, from memory, those tasks they have seen performed by the worker. It is expected that some students will have trouble expressing what they have observed. During the second half of the class they are to complete the list of tasks by using the Aide and Assistant Level Health Careers Task List.

The following career titles can be written on the chalkboard and the students allowed to select any set of six that interests them:

SET 1

Dental Assistant
Doctor's Office Aide
Medical Laboratory Assistant
School Health Aide
Respiratory Therapy Aide
Physical Therapy Aide

SET 2

Pharmacy Aide
Medical Assistant
Dental Aide
Medical Records Aide
Mortuary Aide
Recreation Therapy Aide

SET 3

Ward Clerk Aide
Home Health Aide
Nurse Assistant
Radiologic Aide
Laboratory Aide
Rehabilitation Assistant

SET 4

Community Health Aide
Receptionist Aide
Central Service Aide
(Plus three more by choice)

ALTERNATE ACTIVITIES

1. Divide the class into pairs; give each pair an aide or assistant level career and the list of tasks performed by the worker. Give the students time to prepare a summary, description, or some type of creative presentation for teaching the rest of the class members about the career and the skills and tasks required to do that particular job.

2. Interview an aide level or assistant level worker to find out what skills he/she utilizes during a typical day.

AIDE AND ASSISTANT LEVEL HEALTH CAREERS TASK LIST

WARD CLERK AIDE

Label requisitions with an addressograph
Take inventory
Requisition supplies
Order dietary supplements and stock nourishments
Fill out the daily report sheet
Fill out the dietary sheet
Notify the dietary department of dietary change
Prepare the patient's chart
Record vital signs
Deliver messages
Receive telephone calls
Make requested telephone calls
Greet visitors
Answer the intercom
Distribute mail
Deliver flowers to patients
Admit a new patient to the ward
Transfer patients
Make appointments and referrals
Discharge the patient

DOCTOR'S OFFICE AIDE

Take inventory
Requisition supplies
Replace linen
Clean thermometers
Wash glassware and cleaning instruments
Wrap supplies for sterilization
Sterilize supplies
Arrange brochures and magazines
Bill patients
File patients' records
Pull the patient's record from the file
Receive telephone calls
Make requested telephone calls
Greet visitors
Fill out basic information forms
Make appointments and/or referrals
Remind patients of scheduled appointments
Collect a sputum specimen or urine specimen
Prepare specimens for mailing
Test urine for sugar or acetone
Check the specific gravity of urine
Assist the patient to dress

DOCTOR'S OFFICE AIDE (CONT.)

- Measure the weight and height of patient
- Measure the weight and height of an infant
- Record vital signs
- Take patients temperature
- Take the pulse and respiratory rate
- Take the blood pressure
- Assist with the physical examination
- Cleans simple wounds
- Set up sterile trays
- Apply an ice bag
- Assist the patient with crutch walking

SCHOOL HEALTH AIDE

- Take inventory
- Requisition supplies
- Replace linen
- Clean thermometers
- Type correspondence and forms
- Assist with the maintenance of student health records
- File patients' records
- Record vital signs
- Receive telephone calls
- Greet patients
- Measure the height and weight of patient
- Take an oral temperature
- Take the pulse or respiratory rate
- Take the blood pressure
- Assist with teaching principles of personal hygiene
- Assist with teaching basic principles of dental hygiene
- Assist with teaching principles of nutrition
- Apply an ice bag
- Cleans simple wounds

MEDICAL RECORDS AIDE

- Receive telephone calls
- Process outgoing correspondence
- Replace transcription tapes
- Compile the daily census sheet
- Check admission cards
- Record admissions and discharges
- Place reports on patient's charts
- Type correspondence and forms
- Check the chart for completeness
- Assist in the preparation of insurance claims
- File patient's records
- Pull the patient's record
- Collect vital statistical data

CENTRAL SERVICE AIDE

Receive telephone calls
Replace linen
Dust shelves and equipment
Take inventory
Requisition supplies
File requisitions
Check expiration dates on stored sterilized supplies
Deliver supplies to departments
Clean thermometers
Wash glassware
Clean instruments
Assemble sterile and nonsterile trays
Wrap supplies for sterilization
Sterilize supplies

MEDICAL LABORATORY ASSISTANT

Operate and maintain electrical and electronic instruments, microscope, and lab equipment
Clean and care for glassware
Operate and maintain balance
Use aseptic techniques
Sterilize equipment
Take measurements and make calculations
Mix solutions
Take histologic and cytologic specimens
Implement safety measures
Utilize isolation techniques
Measure basal metabolism
Operate electrocardiograph
Prepare and stain slides
Write requisitions and reports
Requisition and stock supplies
Make up reagents (solutions)
Collect blood, nose and throat cultures
Use hemocytometer and automatic cell counters
Test for occult blood
Culture and plate organisms
Screen blood donors
Do slide typing of blood

PHARMACY AIDE

Type labels
Prepare dosages and packages
Take inventory and order supplies
Store supplies and equipment
Read and interpret doctor's order sheet

PHARMACY AIDE (CONT.)

- Pour medications
- Mix solutions
- Prepare dose systems
- Use aseptic techniques
- Return drugs to stock
- Destroy damaged drugs
- File Kardex and profile systems

MORTUARY AIDE

- Prepare flower arrangements
- Organize seating arrangement
- Greet the family and friends
- Accomodate ceremonial variations based on custom
- Assist with embalming
- Assist in conducting the procession
- Keep records and reports
- Show caskets and vaults
- Requisition supplies
- Clean instruments
- Use aseptic techniques
- Use sterilization procedures
- Shampoo hair
- Shave the face
- Transport deceased via stretcher
- Bathe the deceased

DENTAL ASSISTANT

- Schedule appointments
- Keep patient folders and case histories
- Maintain office supplies: inventories, orders, stocks
- Maintain dental supplies: inventories, orders, stocks
- Operate and maintain instruments and equipment
- Use sterilization and disinfection procedures
- Assist at chair side with operative procedures
- Use radiography procedures
- Handle x-ray equipment
- Process film
- Use film mounts and mounting
- Use first-aide procedures
- Prepare proper drug dosage

MEDICAL ASSISTANT

- Office procedures:
  - Use telephone and prepare written communications
  - Type
  - File
  - Keep records
  - Organize the patient's chart
  - Make appointments with other departments (admitting, x-ray, therapy)
  - Fill out insurance forms and requisitions
- Patient care procedures:
  - Position patient for examination
  - Collect specimens
  - Assist in examination
  - Check vital signs
  - Use aseptic techniques
  - Obtain patient history
  - Sterilize small instruments
  - Use emergency procedures
  - Take portable EKG

PHYSICAL THERAPY AIDE

- Receive patients
- Maintain patient schedule
- Maintain office and patient's records
- File records and reports
- Care for expendable supplies
- Clean, disinfect and maintain hydrotherapy
- Maintain exercise equipment
- Transport patients in wheelchair or stretcher
- Position the patient
- Check passive range of motion
- Remove and apply the patient's supportive and assist devices
- Set up special frames and beds
- Observe and report the patient's comfort in traction, equipment and plaster casts
- Assist passive exercises
- Assist with elimination procedures
- Record intake and output
- Check vital signs
- Adjust circ-o-lectric bed, tilt table
- Assist with treatment procedures for: cold and hot packs, whirlpool, infrared, Hubbard tank, paraffin, and moist air
- Assist the patient to ambulate utilizing crutches, walker, or wheelchair
- Assist with self-care and active range of motion exercises

RADIOLOGIC AIDE

Prepare the patient for diagnostic x-ray
Position the patient for diagnostic x-ray
Position the patient for therapeutic x-ray
Utilize safety equipment to guard against radiation
Measure radioactive materials under the direction of radiologist
Handle radioactive materials safely
Take inventory of supplies and equipment
Prepare contrast media
Obtain the patient's chart from the floor
Transport the patient via stretcher or wheelchair
Transport portable equipment
Apply common safety measures
Use aseptic technique
Mix film-processing solution
Maintain film hangers and cassettes
Number cassettes and screens
Operate automatic film-processing machine

NURSE ASSISTANT

Clean utensils
Clean thermometers
Use aseptic techniques
Use isolation techniques
Use safety procedures
Assist in body mechanics
Use bedmaking procedures (open, closed, occupied, surgical)
Bathe patient (partial, complete, sitz, tub, shower)
Position the patient
Provide morning, afternoon and bedtime care
Record intake and output
Collect specimens
Use admission, transfer, and discharge procedures
Assist the patient with meals
Prepare hot and cold applications
Check vital signs
Record and report patient status
Provide post-mortem care
Apply patient restraints
Apply bandages and binders
Give preoperative and postoperative care
Use bowel and bladder elimination procedures
Ambulate the patient

RESPIRATORY THERAPY AIDE

- Clean and maintain the following equipment:
  - Bird respiratory circuit (adult and infant)
  - PR-2 respiratory circuit (adult and infant)
  - M-1 respiratory circuit
  - CPAP respiratory circuit
  - Heated aerosol
  - Bourns respiratory circuit
  - Dranger respiratory circuit
- Administer I.P.P.B. treatment
- Administer assistor respirator
- Administer aerosol generator and steam vaporizer
- Administer aerosol generator (bubbler type)
- Administer humidifier (nebulizer and ultrasonic)
- Administer portable or piped oxygen (nasal, mask and tent)
- Determine and report adverse conditions
- Operate and administer brochodilator
- Record treatment given
- Transport patients
- Position patients for treatment
- Inventory and stock supplies and equipment

RECEPTIONIST AIDE

- Arrange brochures and magazines
- Empty cigarette receptacles
- Distribute mail
- Process outgoing correspondence
- Arrange displays
- Type correspondence and forms
- File patient's records
- Pull patient's records from the file
- Bill patients
- Deliver messages
- Receive telephone calls
- Greet visitors
- Remind patients of their scheduled appointments
- Make appointments and referrals
- Fill out basic information forms

HOME HEALTH AIDE

- Wash glassware
- Clean thermometers
- Damp dust furniture and floors
- Launder clothes
- Receive telephone calls
- Make work plans
- Teach principles of nutrition
- Teach sanitation and food storage principles

HOME HEALTH AIDE (CONT.)

- Prepare simple foods
- Serve food trays and feed patients
- Record vital signs
- Take temperature
- Take pulse rate and respiratory rate
- Give range of motion exercises
- Bathe an infant
- Assist the patient to dangle, ambulate, or crutch walk
- Apply an ice bag or water bottle
- Take blood pressure
- Measure intake and output
- Clean simple wounds
- Move the patient by wheelchair
- Assist the patient to dress
- Assist the patient to bathe
- Move patients up in bed
- Shave patients
- Give a backrub
- Give a bed shampoo

LABORATORY AIDE

- Replace linen
- Empty wastepaper basket
- Wash glassware
- Take inventory
- Requisition supplies
- Sort supplies on receipt of shipment
- Label requisitions with the addressograph
- Receive telephone calls
- Wrap supplies for sterilization
- Sterilize supplies
- File laboratory reports
- Deliver laboratory reports to the ward
- Collect specimens for mailing
- Prepare specimens for mailing
- Collect urine specimens
- Prepare culture media plates
- Check specific gravity of urine
- Test urine for sugar and/or acetone
- Spin down blood and urine

COMMUNITY HEALTH AIDE

- Take an oral temperature
- Take a rectal temperature
- Take an auxillary temperature
- Take pulse and respiratory rate

COMMUNITY HEALTH AIDE (CONT.)

Take blood pressure
Measure weight of an infant
Measure length of an infant
Test urine for sugar and/or acetone
Assist the patient with crutch walking
Fill out basic information forms
Make a health related survey
Collect vital statistical information
Make appointments and referrals
Teach basic principles of dental hygiene and personal hygiene
Teach principles of nutrition
Teach sanitation and storage of food
Teach basic prenatal care, post-partum care, and infant care
Assist with teaching methods of contraception

DENTAL AIDE

Replace linen
Take inventory
Requisition supplies
Wash glassware
Clean instruments
Wrap supplies for sterilization
Sterilize supplies
Type correspondence and forms
File patient's records
Pull patient's records from the file
Bill patients
Receive telephone calls
Make requested telephone calls
Make appointments and referrals
Remind patients of their scheduled appointments
Greet visitors
Prepare the patient for the dentist
Record the dentist's observations
Prepare filling materials
Take x-rays
Develop x-rays

REHABILITATION AIDE

Replace linen
Requisition supplies
Take inventory
Label requisitions with an addressograph
File patients' records
Receive telephone calls
Move the patient by wheelchair

REHABILITATION AIDE (CONT.)

Move the patient by stretcher
Fill the whirlpool
Assist the patient to dangle
Assist the patient to dress
Assist the patient to ambulate
Assist the patient to walk with parallel bars
Assist the patient with crutch walking
Give range of motion exercises
Read aloud to the patient
Play games with the patient
Assist the patient with crafts

LEARNING ACTIVITY PACKAGE 17

Category:	Related Health Specialties
Focus:	Speech Pathologist
Activity:	Resource Person/Demonstration
Objective:	At the conclusion of this lesson, the student will be able to write on a student worksheet a description of the work done by a speech pathologist.

EQUIPMENT, SUPPLIES, AND FORMS

1. Resource Person Information Sheet (see sample included in the back of this notebook)

RATIONALE

The purpose of this activity is to expose students to a career in the health related specialties. It provides students with an opportunity to experience by demonstration the tasks, skills, forms, and equipment used by a speech pathologist.

SUGGESTED PROCEDURES

The job title of the speech pathologist will vary depending on the location and institution: speech pathologist; speech correctionist; speech teacher; speech specialist; therapist. Many speech pathologists are also audiologists.

In addition to describing basic career information to the students, have the resource person explain how sound and speech patterns develop in human beings and the ways and times in a person's life when testing speech is important. Demonstrations of typical speech pattern problems which need therapy or correction add a great deal to the presentation.

Have the resource person demonstrate a speech test using the speech sentences and paragraph on the Speech Data Interview Form and the Speech Data Collection Form found in LAP 12: Operation MEDIC. Have him/her explain to the students the methods, purpose, and procedure used to arrive at a final diagnosis.

If the resource person is also an audiologist, have him/her tell about procedures for testing hearing and how to use the audiometer (used by most school nurses during testing programs).

Most of the resource persons in this field give excellent demonstrations with high interest and response from the students.

Discuss with the students where speech therapists work, including: rehabilitation centers; medical centers and hospitals; public schools; university speech clinics; geriatric centers; state rehabilitation programs; federal rehabilitation programs; private speech clinics; private practice; university research centers; and mobile community speech correction centers.

ALTERNATE ACTIVITY

Alternative or additional speakers in health related specialties include: school nurses; podiatrists; audiologists; physiologists; and opticians.

LEARNING ACTIVITY PACKAGE 18

Category: Related Health Specialties

Focus: Registered Emergency Medical Technician (Paramedic)

Activity: Resource Person

Objective: At the conclusion of this lesson, the student will be able to describe on student worksheets an awareness of trends in medicine, and the role of paraprofessionals in the health field.

EQUIPMENT, SUPPLIES, AND FORMS

1. Resource Person Information Sheet (see sample included in the back of this notebook)
2. Trends in Medicine (see sample enclosed in this learning package)
3. Additional information may be obtained from the Illinois Department of Public Health, Emergency Medical Services, Springfield, IL

RATIONALE

The purpose of this activity is to expose students to careers in the health paraprofessional field. It provides students with an opportunity to meet and talk with someone dealing directly with the jobs and to gain information and exposure not normally available in the classroom.

SUGGESTED PROCEDURES

Provide the resource person with information explaining the objective of the lesson in advance of the scheduled presentation. The resource person should be able to describe some trends in medicine, describe his/her own job, and name and demonstrate some of the equipment used. Leave some time for student questions. Students should prepare some questions prior to the presentation.

If a registered EMT is not available from a hospital emergency room or trauma center, contact ambulance services, fire stations, and/or funeral homes. Many of these workers have taken the courses prescribed for emergency medical technicians.

ALTERNATE ACTIVITY

Have the students research and write about other trends in medicine; such as, pharmacology, computer monitoring, extrocorporeal technician, sonal technician, and physicians assistant.

TRENDS IN MEDICINE

A trend is a change or idea which causes a change in jobs, organizations, life styles, or attitudes.

1. Name a health trend: ______________________________
   - A. How would this affect you?
   - B. What does this mean to others?
   - C. What occupation(s) would this trend affect?
2. Name a health trend: ______________________________
   - A. How does this affect you?
   - B. What does this mean to society?
   - C. How would this affect a job(s) in the area?
3. Name a health trend: ______________________________
   - A. How would this affect you and/or your family?
   - B. How does this affect people's life styles?
   - C. What changes in an occupation(s) would this trend cause?
4. Name two trends which have "created" an occupation:

Trend	Occupation
1.____________________	1.____________________
2.____________________	2.____________________

LEARNING ACTIVITY PACKAGE 19

Category:	Related Health Specialties
Focus:	Pharmacy
Activity:	Field Trip
Objective:	At the conclusion of this lesson, the student will be able to orally describe at least two differences between the retail pharmacist and the hospital pharmacist and be able to describe some of the basic duties, educational requirements, employment opportunities, and salary ranges for the two types of pharmacist positions.

EQUIPMENT, SUPPLIES, AND FORMS

1. Career Opportunities in Pharmacy. Available from: American Association of Colleges of Pharmacy, Office of Student Affairs, 8121 Georgia Avenue, Suite 800, Silver Springs, MD 20910

2. Field Trip Observation Form (see sample included in the back of this notebook)

3. Health Career Pathway Series #9: Pharmacy, The World of Drugs and Medicines. Available from: The Health Careers Pathway Series, Health Careers Council of Illinois, 400 North Michigan Avenue, Chicago, IL 60611

RATIONALE

The purpose of this field trip is to expose students to careers in pharmacy. It provides students with an opportunity to meet and talk with someone working in the field and to gain information and exposure not normally available in the classroom.

SUGGESTED PROCEDURES

The local hospital pharmacist is a good resource person. Have him/her present basic information about careers in pharmacy and to talk about:

1. The changes in types of drugs from 1900 to present.
2. The changes in the dispensing process from then to now.
3. The advances and cures that have come about through drug therapy.
4. Future predictions about advances in pharmacy.
5. Future predictions about cures, treatments, geneology, and regeneration through pharmacology.
6. A job of the near future: pharmacy technician.

A community/retail pharmacy which is within walking distance offers a good change-of-pace for the field trip, but the hospital pharmacy should also be visited if possible.

ALTERNATE ACTIVITIES

1. Show the films, Mr. Galen Comes to Town (28 minutes) #4304 and But More Than This (29 minutes), #3580. Available free from: Modern Talking Picture Service, 1212 Avenue of Americas, New York, NY 10036.
2. Organize a field trip to a business which manufactures or distributes drugs, especially one which has a research laboratory.
3. Organize a field trip to a clinic or hospital pharmacy.
4. Have students interview a local pharmacist to determine common laws governing the dispensing of drugs and the dangers of drug abuse.
5. Have a pharmacist visit the class to tell of what he/she learned in pharmacy school, licensure requirements, and to show students samples of various kinds of medications and various methods of administration.

LEARNING ACTIVITY PACKAGE 20

Category: Physical, Mental, and Social Rehabilitation Occupations

Focus: The Field of Physical Rehabilitation

Activity: Resource Person

Objective: At the conclusion of this lesson, the student will be able to describe orally at least two places where a physical therapist works, and the educational requirements, employment opportunities, and salary range for careers in physical rehabilitation.

EQUIPMENT, SUPPLIES, AND FORMS

1. Types of Treatment and Physical Rehabilitation (see sample enclosed in this learning package)
2. Job Future in Physical Therapy (see sample enclosed in this learning package)
3. Physical Therapy Career Ladder (see sample enclosed in this learning package)
4. Resource Person Information Sheet (see sample included in the back of this notebook)

RATIONALE

The purpose of this lesson is to expose the students to careers in physical rehabilitation; to provide an opportunity for the students to talk with a person who works directly with the rehabilitation of people who are temporarily or permanently handicapped; and to make students aware of the newest techniques and skills required, and the attitudes and the temperament needed to work with the emotionally ill.

SUGGESTED PROCEDURES

To increase student interest and understanding, it is recommended that the resource person use an illustration or a demonstration to present an overview of the work involved in physical rehabilitation.

Have the students read in advance the information on types of treatment and physical rehabilitation. This provides students with enough background information to ask relevant questions of the resource person.

The special education teacher, school nurse, or school psychologist are good resource people for this lesson. Also seek the assistance of a physical therapist in your local hospital or nursing home.

Teachers may obtain materials free-of-charge about physical therapy procedures and employment opportunities in Illinois for classroom use by writing to: American Physical Therapy Association (APTA), Illinois Chapter, 1412 Orchard, DesPlaines, IL 60018.

For materials on career education write to: Education Committee, Illinois Chapter of American Physical Therapy Association, 2035 S. 15th Avenue, Broadview, IL 60153.

ALTERNATE ACTIVITIES

1. Have students find out how the following illnesses or conditions cause disablement to a person, and make a report on one of these conditions to the class: cerebral palsy; muscular dystrophy; brain-injured child; stroke (cerebral vascular accident); arthritis; rheumatism; essential hypertension; arteriosclerosis; and multiple sclerosis.
2. Have students investigate how to make a home paraffin bath. Have a student tell the class how this device may be used in treating a patient.
3. Find out the underlying principles of the use of diathermy or sonolator machines. Explain these principles to the class. Also explain how the therapist uses these machines in treatment.

4. Have the students define the following terms: modality, A.D.L., orthotics, massage, resistive exercises, Hubbard tank, chronic ailment, and whirlpool bath.

5. Local hospitals and rehabilitation centers are often willing to conduct tours through their physical therapy departments. Physical therapy department heads should be contacted to make arrangements.

TYPES OF TREATMENT AND PHYSICAL REHABILITATION

Treatment Orders

Treatment orders include a variety of procedures to be performed for a patient, with his/her cooperation. Such activities as involuntary exercises and ice-pack applications are treatments.

Special Therapy

Sometimes a patient receives special treatments from personnel in other hospital departments. Inhalation therapy is used when the patient requires special bone and muscle rehabilitation. Radiotherapy is given in the X-ray department to the patient who is receiving doses of radiation, generally for the purpose of killing cancerous tissue.

Physical Therapy

Physical therapy includes the use of exercise and massage, as well as light, heat, cold, water, and electricity, in the treatment of disease and injury. The physical therapy department will ordinarily have equipment such as whirlpools, parallel bars, ramps, crutches, wheelchairs, braces, and prostheses (artificial limbs, etc.). Trained physical therapists help patients to overcome or adjust to their disabilities through instruction and supervised practice.

Occupational Therapy

Occupational therapy consists of directed activities such as games and work projects. These activities aid in the treatment and rehabilitation of patients. The treatment is adapted to suit the particular needs of each patient to provide him/her with the sort of diversioh and skills that will best contribute to his/her physical and emotional progress. In this department, partially disabled patients learn to develop and explore new vocational possibilities. In many instances, the activities of the occupational therapy department are coordinated with those of the physical therapy department, so that each patient may develop his/her skills through both work and recreation.

Inhalation Therapy

Oxygen and other gases are used in inhalation therapy as a treatment for pulmonary (lung) difficulties. These gases may be administered by face mask, tent, or catheter (tube).

JOB FUTURE IN PHYSICAL THERAPY

What is the Present Job Market for Physical Therapists?

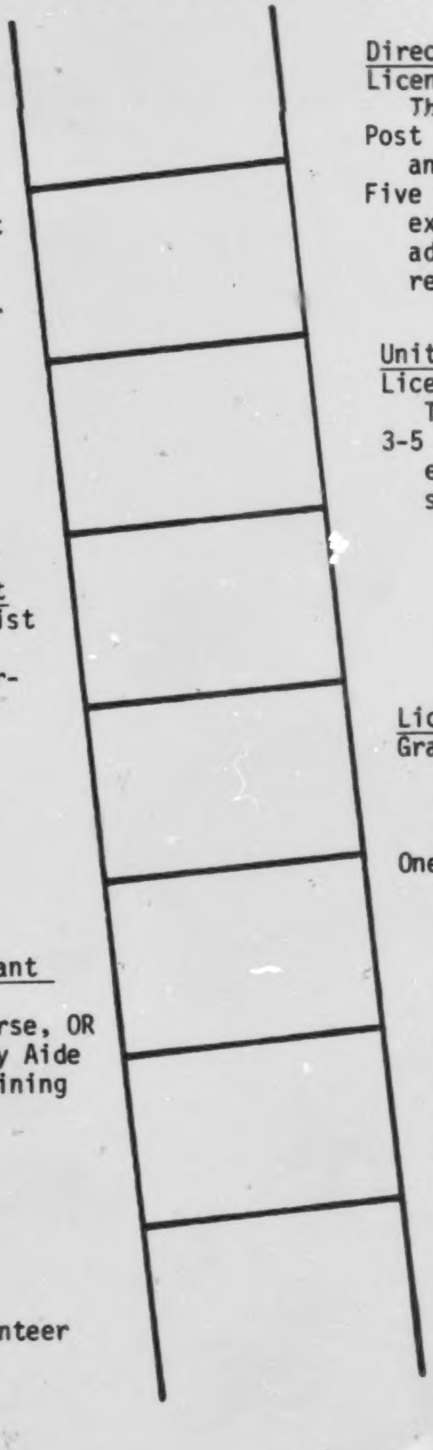
According to the United States Bureau of Labor Statistics, in 1969 there were 1,600 vacancies for physical therapist jobs. This represented 18.6% of the total of employed physical therapists. In 1969 there were 600 vacancies for physical therapy assistant positions. This represented 6.9% of the total of employed assistants or aides.

What Will the Job Market be in 1980?

According to the United States Bureau of Labor Statistics, there were 14,000 physical therapists employed in the United States in 1969. In 1980 there will be a need for 36,000 physical therapists. This represents an increase of 157%.

In 1969 there were 9,000 physical therapy assistants or aides employed in the United States. In 1980, it is estimated by the United States Bureau of Labor Statistics that there will be a need for 36,000 physical therapy assistants or aides. This represents an increase of 400%. It is estimated that there will be a need for two therapy assistants, and two therapy aides for each employed licensed physical therapist in 1980.

PHYSICAL THERAPY CAREER LADDER



Director
Licensed Physical Therapist
Post graduate education and training
Five or more years of experience including administrative responsibilities

Assistant Director of the Department
Licensed Physical Therapist
Post graduate study and training
5 years of experience under supervision

Unit Supervisor
Licensed Physical Therapist
3-5 years of training and experience under supervision

Senior Physical Therapist
Licensed Physical Therapist
1-3 years of practical experience under supervision

Licensed Physical Therapist
Graduation from an approved four year college course with a B.S. in physical therapy
One year of on-the-job training experience

Physical Therapy Assistant
Graduate from a 2-year Community college course, OR
Experience as a Therapy Aide
1-2 year in-service training period

Physical Therapy Aide
Work as a Nurse's Aide
3-6 months on-the-job training period

Hospital Volunteer

LEARNING ACTIVITY PACKAGE 21

Category:	Physical, Mental, and Social Rehabilitation Occupations
Focus:	Mental Health Worker
Activity:	Film/Field Trip
Objective:	At the conclusion of this lesson, the student will be able to describe on a student worksheet some of the duties and working conditions of mental health workers who work with the mentally handicapped.

EQUIPMENT, SUPPLIES AND FORMS

1. Field Trip Observation Form (see sample enclosed in the back of this notebook)
2. Resume: Jane Doe (see sample enclosed in this learning package)
3. Film: World of the Right Size. Available from: Illinois Office of Education, Media and Resource Center, 100 North First Street, Springfield, IL 62777

RATIONALE

Today there is an increasing interest in caring for and educating the mentally retarded. The purpose of this lesson and field trip is to expose the students to the world of the mentally handicapped and to provide them with a glimpse into mental health care delivery. The number of workers in the mental health field is increasing; yet students have had little exposure to mental health facilities.

SUGGESTED PROCEDURES

One type of individual that the mental health worker may assist is the mentally handicapped. The students need to gain an understanding of this condition.

Show the film, World of the Wrong Size, and follow it with a teacher-directed, student discussion of what the film was about. Attitudes about the mentally handicapped will surface and can be examined in light of the film.

Since some students will have had no past experience with the mentally handicapped, it is important to take time to explain and discuss: what will happen on the field trip; what the workers do; how retarded people learn; and feelings of the retarded people and of the students.

Private, state and federally funded schools for the mentally handicapped are excellent places for field trips. Mental health facilities and zone centers may be utilized. However, many of these facilities will not allow the students to see the patients; therefore, the field trip consists of an explanation from a guide and a tour of the physical plant. Allow two hours for the field trip and arrange in advance for the students to have an opportunity to work one-on-one or in small groups with music or activity therapy.

It should be explained and stressed to the students that their behavior (attitude, responses, facial expressions, loudness, etc.) could have an effect on the residents of the facility. Cooperation and appropriate behavior is essential for a successful field trip.

Students will be able to observe art, music, puppet, physical, occupational, and/or activity therapy occupations, and observe the types of tasks, skills, and activities of the workers.

With the proper background and help provided to the students from the teacher, this field trip can be one of the highlights of the health cluster. Preparing the students, setting high expectations in performance, and giving the framework for understanding the mentally handicapped will insure success.

Encourage the students to write and make comments about their thoughts, feelings, and observations on this field trip. The Jane Doe Resume can be used before or after the field trip as a sample of the type used by professional employees of a mental health facility.

ALTERNATE ACTIVITIES

1. Arrange a field trip to a zone center. In cooperation with the tour guide, have the students: walk around to observe workers and the facility, talk about what was seen, demonstrate method of mental or physical rehabilitation, and complete the tour and follow-up with questions and answers.
2. Ask a mental health worker from your nearest regional office of the Illinois Department of Mental Health to speak to the class regarding career opportunities, trends, and places of employment in the field of mental health.
3. Have a special education teacher as a guest speaker.
4. Take a field trip to a special education class.

JANE DOE

000 Beekman Place
New York, N.Y.
WA 0-00000

MUSIC THERAPIST

EDUCATION: University of Iowa, Iowa City, Iowa
B. S. Degree, 1968. Major in Music, Minor in Psychology

High School of Music and Art, New York, N.Y.
Diploma, 1964. Graduated Top 10% of class.

Among college level music courses I have taken which relate to my major field of study are:

- Sightsinging and Dictation
- Harmony and Counterpoint
- Psychology of Music
- Music Literature for Children
- Music in Recreation and Therapy
- Training in Vocal Techniques
- Instrumental Musicology
- American Folk Music

In addition, I have had more than eight years of private instruction in piano, guitar, recorder and accordian.

EXPERIENCE: (Summer and Part-time)

6/67 - 9/67 Educational Alliance, (Camp Eden) Troy, N.Y.
Music Counselor for retarded children

6/66 - 8/66 Hilltop Country Day School, Great Neck, N.Y.
Nursery Counselor

9/64 - 6/65 Music Workshop, Roslyn Heights, N.Y.
Accordian Teacher, Receptionist

6/64 - 8/64 Henry Street Settlement House, New York, N.Y.
Volunteer Leader, Saturday Childrens Trips.

PERSONAL:
Date of Birth: 6/26/46
Marital Status: Single
Appearance: 5'2", 110 lbs.
Health: Excellent
Interests: Ballet, Writing, Sports
Languages: Good command of Spanish and Italian

REFERENCES UPON REQUEST

LEARNING ACTIVITY PACKAGE 22

Category:	Physical, Mental, and Social Rehabilitation Occupations
Focus:	Mental Health Technician
Activity:	Resource Person/Demonstration
Objective:	At the conclusion of this lesson, the student will be able to describe on a student worksheet the: basic duties, educational requirements, employment and job advancement opportunities, and salary ranges for the different levels of Illinois State mental health technicians.

EQUIPMENT, SUPPLIES, AND FORMS

1. Job descriptions for workers in the mental health field. Available free from: State of Illinois, Department of Personnel, Springfield, IL 62704
2. Descriptions of various "Specialists in Mental Rehabilitation" (see sample enclosed in this learning package)
3. Resource Person Information Sheet (see sample enclosed in the back of this notebook)

RATIONALE

The purposes of this lesson are to expose the students to occupations in mental health; to provide them an opportunity to talk with a person who works directly with people who are emotionally ill; and to make students aware of the techniques, skills and temperament needed to work with the emotionally ill.

SUGGESTED PROCEDURES

To increase student interest and understanding, have a resource person use an illustration or a demonstration in a presentation of the role of mental health technicians. At the conclusion of the presentation and class discussion, have each student select one or more mental health specialties and fill out a Resource Person Information Sheet.

Ask the resource person to do a demonstration/illustration of the techniques used to work with the patients, such as: behavior modification, token-reward system, role-playing/role training, role reversing, positive focus/feedback, play therapy, puppet therapy, art therapy, or music therapy.

Provide students with copies of the job descriptions, or post them on the classroom bulletin board.

For additional information on mental health technician positions, write to:

Psychiatrist
Council on Mental Education
and Hospitals of AMA
535 North Dearborn
Chicago, IL 60610

Social Worker
The Council on Social Work Ed.
345 E. 16th St.
New York, NY 10017

Mental Health Technician
National Association of Human
Services Technologists
1127 11th St.
Sacramento, CA 95814

Music Threrapist
The National Association
for Music Therapy, Inc.
P.O. Box 610
Lawrence, KA 66044

Clinical Psychologist
American Psychological Assoc.
1200 17th Street, N.W.
Washington, D.C. 20036

Rehabilitation Counselor
American Rehabilitation
Counseling Association
1607 New Hampshire Ave., N.W.
Washington, DC 20009

Occupational Therapist
American Occupational Therapy
Association
6000 Executive Blvd., Suite 200
Rockville, MD 20852

Recreation Therapist
The National Therapeutic
Recreation Society
1601 N. Kent St.
Arlington, VA 22209

Psychiatric Aide

National Association of Human Service Technologists
1127 11th St.
Sacramento, CA 95814

SPECIALISTS IN MENTAL REHABILITATION

Psychiatrist

A medical doctor (MD) who deals specifically with the treatment of mental and emotional illnesses. College, medical school, and an internship are required. A fully qualified psychiatrist completes a three-year residency training period after the internship. In high school a broad college prep course should be taken, good grades attained and all college entrance requirements completed. Prospective doctors usually attend accredited colleges for pre-medical training and medical schools and hospitals for intern training. They must concentrate on ranking high scholastically and take the Medical College Admission Test the year before medical school. Medical school training is usually three or four years; usually some psychiatric courses are included in general medical education. Professional training consists of a one-year hospital internship; a three-year residency in an approved hospital or agency concerned with the diagnosis and treatment of mental and emotional disorders; and two years of additional experience before taking an examination for certification by the American Board of Psychiatry and Neurology.

Clinical Psychologist

A specialist in assessing and alleviating emotional and mental disorders. By advanced training and experience, the clinical psychologist develops competence in psychological assessment and the modification of behavior through psychotherapy and other means. Further career opportunities might be in research consultation and teaching. Training requirements include a bachelor's degree (four years) in psychology; good grades (B average or better); courses in social sciences, physical and biological sciences, math, statistics, and foreign language; Master's degree (two years); and the Ph.D. degree (two or three years).

Social Worker

His/her training provides expertise that bridges the gap between the patient and the psychiatrist and/or the hospital, clinic, family, and community. Social workers also carry out treatment, seeing patients regularly and working with and resolving specific problems. Training requirements include a bachelor's degree with emphasis in liberal arts preferred. The Master's degree consists of class and field work.

Registered Nurse

Nurses in psychiatric settings may function in a variety of roles, depending on the extent of the nurse's preparation and competence. These roles may include individual and group psychotherapy, administration, and direction of staff development. Training requirements include graduate programs (Master's and Ph.D. degrees) that prepare a clinical specialist for more advanced nursing practice in psychiatry. Technically speaking, the term psychiatric nurse refers only to those with advanced academic preparation in the specialty area. (Only 5% of all registered nurses work in a psychiatric setting). State board examinations for R.N. are required.

Rehabilitation Counselor

Concerned with the quality of living and emotional life of the client; gives most attention to helping the patient return to productive activity. Training includes an undergraduate degree in behavioral sciences or special education. Many agencies require a Master's degree.

Mental Health Technician

Helps, treats, works with and takes direct charge of emotionally ill and mentally retarded patients in hospitals and community settings. Training covers a variety of areas including individual and group development, personality structure, nature of mental illness, basic nursing, and medical science. Many colleges offer a two-year program leading to an A.A. degree.

Occupational Therapist

Contributes to the physical and emotional well-being of the patient through use of selected purposeful activities. Training requirements include good grades in high school plus active participation in extra-curricular activities. Completion of a college curriculum in occupational therapy accredited by the AMA Council on Medical Education in collaboration with the American Occupational Therapy Association is required.

Music Therapist

Makes use of the art of music to accomplish therapeutic aims. The training of a music therapist is unique among all college degree courses because it not only allows a thorough study of music throughout the four years but provides training which enables a broad knowledge of one's self as well as others. A six-month period of clinical training in an affiliated psychiatric hospital is required in addition to 128 semester hours of on-campus training.

Recreation Therapist

Is involved in organizing, administering, and presenting therapeutic recreational activities that make a definite contribution to recovery from or adjustment to an illness, disability, or specific social problem. Although a few positions exist for non-college graduates the better jobs demand college training and degrees.

Psychiatric Aide

Is a "people helper" who works closely with mentally or emotionally disturbed or retarded patients. While giving them skillful physical care, he/she assists in a rehabilitation program. No professional degrees are required;. only the successful completion of comprehensive training programs.

LEARNING ACTIVITY PACKAGE 23

Category: Clinical Laboratory and Related Technical Occupations

Focus: The Field of Medical Technology

Activity: Field Trip: Community Blood Bank

Objective: At the conclusion of this lesson, the student will demonstrate an understanding of the procedures of taking and storing blood, and will demonstrate, through discussion, knowledge of the basic duties, skills, and educational requirements for careers in medical technology.

EQUIPMENT, SUPPLIES, AND FORMS

1. Medical Laboratory Occupations (see sample enclosed in this learning package)
2. Careers in Medical Technology (see sample enclosed in this learning package)
3. Medical Technology Career Ladder (see sample enclosed in this learning package)
4. The Blood Bank (see sample enclosed in this learning package)
5. Medical Technology Careers Quiz (see sample enclosed in this learning package)
6. Field Trip Observation Form (see sample enclosed in the back of this notebook)

RATIONALE

The purpose of this lesson is to expose students to the field of medical technology and to focus on the specialty of blood banking. It provides the students with an opportunity to gain information not normally available in the classroom about the methods, types, and scope of occupations in medical technology.

The demand for technologists is increasing because doctors depend more and more upon laboratory tests to aid in the diagnosis and treatment of patients. In addition, an expanding population and the need for additional hospital facilities influence the increased demand for trained technologists and technicians. There are new technological developments and new automated devices that permit the use of a greater number of tests and machines for which experienced personnel will be needed. Finally, our rising standard of living and increases in union, pension and other welfare benefits provide greater medical service and serve to increase the demand for technologists.

SUGGESTED PROCEDURE

This lesson requires more than one day for completion. Initially, separate the class into three groups; pass out one of the student information sheets to each group. Present half the material in lecture and the other half by some method other than just telling (charades, what's my careers, matching, multiple choice, voting, true or false, etc.).

They take a field trip to a local blood bank. If time and conditions permit, discuss the career while riding on the bus and/or immediately following the field trip.

These are the points which could be introduced when presenting the field of medical technology:

1. Describe what a medical technologist is and what one does on the job.
2. Discuss the type of education needed for various technology certificates. Be sure to mention the local universities which offer training in medical technology. If the university is affiliated with a hospital, the student will be more likely to find a hospital where they can take their technical training.

3. Discuss the future employment opportunities for this career field.

4. Discuss the possibilities for part-time work and the advantages and disadvantages of the job.

5. Investigate the salary range one might expect from this type of work (check with local hospital or institutions).

6. Point out that one might branch out into other areas, e.g., research, computor diagnosis, or sales for a diagnostic drug company.

Additional information on the field of medical technology can be obtained from: Registry of Medical Technologists, 701 South Wolcott Street, Chicago, IL 60612.

MEDICAL LABORATORY OCCUPATIONS

The demand for technologists is increasing because doctors depend more and more upon laboratory tests to aid in the diagnosis and treatment of patients. In addition, an expanding population and the need for additional hospital facilities influence the increased demand for trained technologists and technicians. There are new technological developments and new automated devices that permit the use of a greater number of tests and machines for which experienced personnel will be needed. Finally, our rising standard of living and increases in union, pension and other welfare benefits provide greater medical service and serve to increase the demand for technologists.

The following is a list of some of the occupations found in the medical laboratory: Medical Assistant; Medical Parasitologist; Medical Technologist; Medical Technologist, Bacteriology; Medical Technologist, Chemistry; Chief Medical Technologist; Medical Technologist, History; Tissue Technologist; and Medical Technologist, Teaching Supervisor.

CAREERS IN MEDICAL TECHNOLOGY

Medical Technologist, MT(ASCP)

This person has completed three or four years in an accredited college. The usual course of study focuses on chemistry, microbiology, and related subjects. This is followed by a 12-month technical training period in a hospital accredited by the American Society of Clinical Pathologists. After this period of training one must pass the registry exam to become a registered technologist and earn the right to use the letters MT(ASCP) after one's name.

Certified Laboratory Assistant, CLA(ASCP)

This person must be a high school graduate, preferably with interests in science and mathematics. He/she must then spend one year in a course of training which includes 100 hours of formal instruction plus 40-44 hours per week of laboratory training. The hospital in which this training is taken must be approved by both the American Society of Clinical Pathologists and the American Society of Medical Technologists.

Medical Laboratory Technician, MLT(ASCP)

These laboratory workers have an associate degree from a junior or community college (generally two years of college work) and clinical experience in an approved laboratory. Military personnel trained in armed-forces programs (12 months or longer) may also be eligible, provided they meet the educational standards.

Blood Banking Technologist, MT(ASCP)BB

Persons wishing to gain this title must be in the Register of Technologists MT(ASCP) and spend one year of additional training in a blood banking school accredited by the American Association of Blood Banks, (AABB). They must successfully complete a written examination and a practical examination in blood banking.

Nuclear Medical Technologists, NMT(ASCP)

There are several ways to obtain this degree. A person may begin with a MT(ASCP) and one year of experience in an acceptable clinical radioisotope lab; with a B.S. degree in science and two years of experience in a clinical radioisotope lab; with two years of college including specified science courses and four years experience; or finally with a B.S. degree in physical sciences with specified science courses and four years of experience. In each instance the registry exam must be passed. A NMT(ASCP) works in a radioisotope laboratory, assisting physicians and radiologists in injecting radioactive materials into patients to aid in the diagnosis of disease.

Cytotechnologist, CT(ASCP)

There are eight AMA approved schools of cytotechnology in the United States. Prerequisites include at least two years of college with 12 semester hours in biology. Then follows 12 months of training and education in an approved school, after which a certifying examination given by the Registry of Medical Technologists must be successfully completed. The cytotechnologist screens slides on which there are human cells, looking for abnormalities that are warning signs of cancer. This person is also trained in special staining techniques which make it possible to view the typical cancer cells.

Histologist Technician, HT(ASCP)

This job requires a high school education, one year of training, and passing the examination given by the Board of Registry of Medical Technologist. A histologic technician, HT(ASCP) is responsible for preparing, cutting, and staining tissues which have been removed from the body. This aids the pathologist in detecting disease.

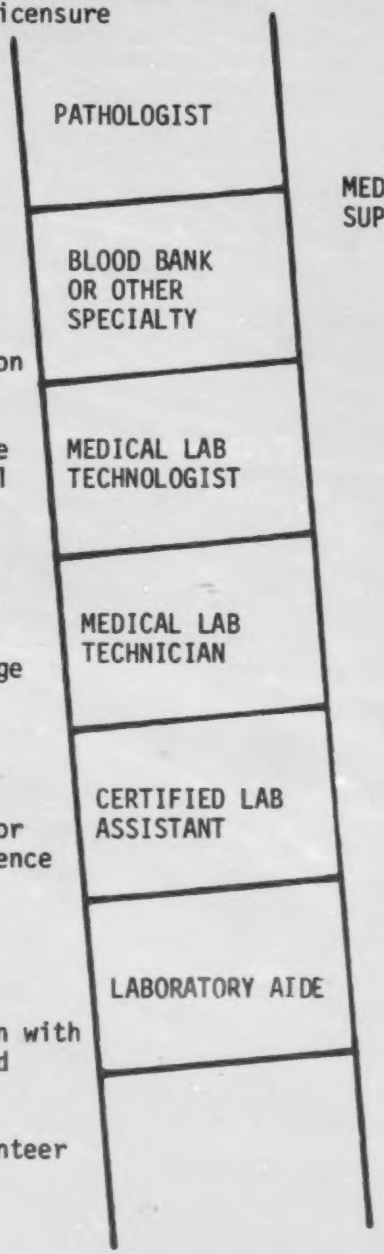
Certified Microbiologist, M(ASCP)

This person has obtained a B.S. degree in chemistry and added one year of experience in chemistry in an acceptable medical lab. This work also requires passing the registry exam.

Specialist Certificate

This certificate is awarded to a specialist in a specific science, for example, chemistry. The title would be for chemistry specialist C(ASCP). This requires a masters or a doctorate degree in the specialty plus three years of experience in an acceptable medical laboratory, and passing the registration examination.

MEDICAL TECHNOLOGY CAREER LADDER



DIPLOMA IN PATHOLOGY
Four years of college
Four years of medical school
One year of medical internship
Two years residency
Licensure

PATHOLOGIST

MEDICAL TECHNOLOGIST
SUPERVISOR

BLOOD BANK
OR OTHER
SPECIALTY

Four years of college
One year of practical
experience & specialization

MEDICAL LAB
TECHNOLOGIST

Four years of college
One year of practical
experience

MEDICAL LAB
TECHNICIAN

Two years of community college
or hospital training course
One year of experience

CERTIFIED LAB
ASSISTANT

One year course or
practical experience

LABORATORY AIDE

High school graduation with
courses in science and
mathematics.
Mechanical dexterity
Participation in volunteer
services.

THE BLOOD BANK

After the field trip to the blood bank, be prepared to discuss the following questions.

QUESTION

1. What is the purpose of a blood bank not located in a hospital?
2. What is the purpose of a blood bank in a hospital?
3. How many blood banks does our community have? Where are they located? Why that number and those locations?
4. Why is blood taken from "suitable donors only"?
5. Who are considered "suitable donors"? How are such people identified and located?
6. Who works in the blood bank? Who is in charge? How many employees does a typical blood bank have?
7. What are some of the duties performed by technicians in the blood bank?

DISCUSSION GUIDES

1. Discuss the advantages and disadvantages of donating blood versus selling blood. Discuss the advantages and disadvantages of being the recipient of donated blood versus sold blood.
2. Explain when and why the blood bank is a part of the department of laboratories or a separate department in a hospital.
3. Describe how donors are obtained and explain how campaigns to obtain blood are conducted.
4. Select a worker in a blood bank; discuss the education, training, and skills required, and attitudes needed to perform the job.

MEDICAL TECHNOLOGY CAREERS QUIZ

NAME ____

1. A medical technologist, MT(ASCP) has completed _______ years of college.
2. A certified laboratory assistant has _____ year(s) training in an approved laboratory.
3. List three other certifications granted through the Registry of Medical Technologists.

   ____________________________________ _____________

   ____________________________________ _____________

   ____________________________________ _____________

4. A medical technologist is directly responsible for patient care.

   _______True _______False

5. A certified laboratory assistant has a more responsible position than a medical technologist.

   _______True _______False

6. A person responsible for staining and preparing tissues for the pathologist is a ____.
7. A person trained in medical technology or related fields is qualified to work only in a clinical laboratory.

   _______True _______False

8. A technologist might expect to work with intricate equipment.

   _______True _______False

9. A specialist certificate requires a _________________ or _______________ degree.

LEARNING ACTIVITY PACKAGE 24

Category:	Clinical Laboratory and Related Technical Occupations
Focus:	Radiologic Technologist
Activity:	Film/Exercise
Objective:	At the conclusion of this lesson, the student will be able to describe on a student worksheet his/her knowledge of the career opportunities, educational requirements, and the personality characteristics of workers in radiological technology.

EQUIPMENT, SUPPLIES, AND FORMS

1. Radiologic Technologist (see sample in this learning package)
2. Radiologic Technologist: Sample Entrance Examination (see sample enclosed in this learning package)
3. Health Technology creates new jobs (see sample enclosed in this learning package)
4. Film: Is a Career as a Technician For You? Available from: Illinois Office of Education, Media and Resource Center, 100 North First Street, Springfield, IL 62777
5. Health Careers Planning Guide. Available from: Illinois Office of Education, Media and Resource Center, 100 North First Street, Springfield, IL 62777

RATIONALE

The purpose of this lesson is to show the students a number of technical occupations, and the tasks, skills, and work situations related to health technology. The student exercise will give the students an opportunity to experience what an entry examination for a technological occupation would be like.

SUGGESTED PROCEDURES

The film gives the students an opportunity to see how health technology fits into business, industry, government, and research. The film is very fast paced, and with an average or below-average class, showing it twice may be necessary. Suggest to the students that they note: specific health careers, tasks performed in each occupation, places where such work is done, and the skills and training required to do the job.

After showing the film, have the class divide into groups on the subjects of radiological technology, EEG or ECG (EKG) technology or other careers in health technology. Pass out the corresponding student information sheets to be read and discussed. If time permits, have the groups summarize what they have learned.

With an average or below-average class, the lesson could be explained in two days, with the class going over the material together. Focus on the EEG, ECG (EKG) technology and radiologic technology before the film and study health technology and its results following the film.

The purpose of the sample entrance examination is to provide an example of an entrance examination. The students should note the emphasis on science and mathamatics as a background for radiological technology. The students need not complete this examination.

Additional information about the field may be obtained from the following sources:

The American Society of Radiologic Technologist
645 North Michigan Avenue
Chicago, Illinois 60611

The American Registry of Radiologic Technologists
2600 Wayzata Boulevard
Minneapolis, Minnesota 55405

ALTERNATE ACTIVITIES

1. Have a resource person, such as an x-ray technician bring x-rays of fractured or broken bones to the class and discuss his/her job with the students.

2. Have a resource person, such as an EKG, (ECG), or EEG technician bring examples of the graph/chart of the function of the body organism and explain why and how it's taken and what it can reveal to the technician.

RADIOLOGIC TECHNOLOGIST

A hundred years ago, it was the dream of the doctor to be able to look inside the human organism. Today, medical science has x-rays and irradiated chemicals to help diagnose and treat certain kinds of illnesses.

The radiologic technologist, in lay terms, is called the x-ray technician. The field has broadened to include another aspect of diagnosis and healing using radioactive chemicals. The technologist has now become the right arm of the doctor. He/she also has become a valued assistant to the doctor specializing in x-ray and radioactive medicine. This doctor specialist is known as a radiologist.

What Does The Radiologic Technologist Do?

Assists the radiologist and other physicians in operating x-ray equipment.

Prepares patients for diagnostic x-rays.

Operates x-ray equipment.

Adjusts setting of x-ray equipment for proper exposure.

Keeps equipment in proper working order.

Keeps records of patients.

Operates mobile x-ray equipment at the patient's bedside or in the operating room.

Prepares chemical mixtures such as barium which patients take before x-ray to make internal organs appear clearly on the plate.

Utilizes proper safety equipment to safeguard against the hazards of radiation.

Assists the radiologist in measuring and safely handling radioactive materials.

Where Does The Radiologic Technologist Work?

Only one out of every four technologists works in a hospital. Some work in medical laboratories, doctor's offices, dentist's offices or clinics. Others work in state and federal health agencies. Some work in public school systems. Some technologists work for local tuberculosis and health agencies. They do x-rays in mobile units, mainly detecting the onset of tuberculosis. Other technologists, especially those trained in radiation technology, may work in nuclear research laboratories. Technologists also may be employed by large industrial organizations.

Formal Preparation

High school graduation is a basic requirement. A person interested in this profession should have courses and good grades in such subjects as chemistry, biology, mathematics, physics, and, if possible, typewriting. The potential technologist will be operating complex equipment with great precision; therefore, the individual should be mechanically inclined, have manual dexterity, be accurate, precise, dependable and safety conscious. The use of potentially dangerous equipment means that the technologist has no margin for making a mistake. Finally, the technologist will be dealing with patients and must be tactful and sensitive to their needs.

Training programs in radiologic technology are now being offered in two-year community colleges, usually associated with a hospital or medical center. Some hospitals provide radiological technology training. Training is also offered by the armed services and vocational-technical schools. The community colleges offer an associate degree for graduates of their program. Registration with the American Registry of Radiologic Technicians is important in obtaining highly skilled and well-paying jobs.

The person who qualifies and who is registered by the American Registry of Radiologic Technologists may use the title of "registered technologist," or RT (ARRT).

Entrance Examination For Radiologic Technologist

If you were to apply to an authorized school of radiologic technology, you would be required to take an entrance examination. This examination consists of five parts:

Verbal Ability: Your ability with words, their meanings and vocabulary.

Quantitive Ability: Your ability at arithmetic and mathematics.

Science: Your background knowledge of science.

Reading Comprehension: Your ability to read and to understand what you are reading.

Space Relations: Your ability to think in terms of space which has three dimensions.

Employment Opportunities

The field is expanding rapidly and the outlook for employment is expected to be excellent in the next 10 years. It is expected that there will be a 60% increase in demand for technologists by 1980. There has been a rapid expansion in the use of x-ray equipment, and in the use of radioactive materials in diagnosis and treatment. Many commercial and industrial firms now require chest x-rays before accepting people for employment, a fact which also makes this field attractive.

Technologists, in addition to regular hours, may be on call for emergencies and for weekend duty. In most instances, they have fringe benefits of holidays, paid vacations, medical services and, in many instances, pension systems.

There are opportunities for advancement such as teaching, supervision, and administration. In addition, it is possible to earn more than the base pay by overtime work.

Work Place

Radiologic Technologists work in many varied situations. Some of these are: hospitals, medical laboratories, doctor's offices, public school systems, x-ray mobile units, research laboratories, clinics, dentist's offices, state and federal agencies, state and federal health facilities, local tuberculosis agencies, and large industrial organizations.

RADIOLOGIC TECHNOLOGIST: SAMPLE ENTRANCE EXAMINATION

Select the correct word which means the same or nearly the same as the word in capital letters. Circle the letter next to the word you choose.

1. DISABLED
   - A. handicapped
   - B. lame
   - C. paralyzed
   - D. disadvantaged
2. MOBILE
   - A. movable
   - B. wandering
   - C. stationary
   - D. readiness
3. THERAPEUTIC
   - A. prescription
   - B. healing
   - C. diagnosis
   - D. scientific
4. RADIOACTIVE
   - A. x-ray
   - B. infrared ray
   - C. giving off radiant energy
   - D. active part of a circle
5. AFFILIATE
   - A. closely connected
   - B. detached
   - C. not separated
   - D. loosely connected

Select the correct word or phrase which means the OPPOSITE of the word given in capital letters.

6. REHABILITATION

A. make fit again
B. refurnish
C. dissent
D. destroy

7. SAFETY

A. clean
B. knowledgeable
C. hazardous
D. mechanical

8. PRECISE

A. inaccurate
B. mathematical
C. scientific
D. measurement

9. INDOLENT

A. lazy
B. industrious
C. technical
D. capable

10. SPECIALIST

A. generalist
B. expert
C. technician
D. educated

Choose the best answer to each of the following mathematics questions.

11. 80% =

A. 1/5
B. 3/8
C. 4/5
D. 3/4

12. 5.17 X 7 =

A. 36.11
B. 3.611
C. 36.19
D. 37.019

13. 3/8 + 1/2 =

A. .875
B. .625
C. 1.25
D. .50

14. If you are asked to make up a solution containing one part of barium to 7 parts of solvent, how much solvent would you add if you used 7 ounces of barium?

A. 50 ounces
B. 25 ounces
C. 56 ounces
D. 49 ounces

15. X-rays travel at the same speed as light rays. This is generally figured at 180,000 miles per second. This rate may be expressed as:

A. 18×10^4
B. 18×10^3
C. 18×10^2
D. 18×10^5

Choose the best answer for the following science questions.

16. From which of the following devices would movement be converted to electrical energy?

A. radio battery
B. hydroelectric plant
C. generator
D. alternating current

17. The organism of the body that delivers oxygen to the cells of tissues is the:

A. white blood cell

B. heart

C. lungs

D. red blood cell

18. The main reason why x-rays can penetrate the human flesh is that these rays are:

A. extremely short rays

B. extremely long waves

C. vibrating very rapidly

D. moving very rapidly

19. The chemical compound represented by the formula C_6H_6 are known by their class name as:

A. hydrocarbons

B. carbohydrates

C. alcohols

D. acids

20. When the heart beats and pushed the blood out into the blood stream, the main artery that it first enters is called the:

A. pulmonary artery

B. ascending vena cavae

C. carotid artery

D. aorta

Read the following paragraph and then answer the three questions given below.

X-rays that are used in taking internal pictures of the human organism are of the same nature as light waves. They are extremely short in nature, and usually are given off when there is a sudden change in the speed of a moving electrical charge. For example, when moving cathode rays strike a solid obstacle or target in a vacuum tube, there are changes in the atoms of the target because of the impact of these rays. As a result there are x-rays given off when the electrons of the electric current make this impact. These short length, rapidly moving rays are then capable of penetrating solid bodies. As they pass through flesh, for example, they are caught on a photographic plate and we have an x-ray plate or radiograph.

21. X-rays are of the same nature as:

A. light waves
B. sound waves
C. electrical waves
D. mechanical waves

22. X-rays are produced when:

A. electrical energy is converted to mechanical energy.
B. moving cathode rays strike an object in its path.
C. electrical current has a high voltage.
D. light rays are converted to x-rays.

23. The conversion of electrical energy striking a target usually takes place in a(n):

A. generator
B. alternator
C. vacuum tube
D. incubator

HEALTH TECHNOLOGY CREATES NEW JOBS

Examples of Health Technology	Emergence of New Health Occupations
Electrocardiograph Machine	(E.C.G.) Technician
Electroencephalograph Machine	E.E.G. Technician
Radioscopic Equipment A. scintillation detector B. scanners	Nuclear Medical Technologist
Heart-Lung Machine	Heart-Lung Technician (may be called Extracorporeal Technician)
Kidney Dialysis Machine	Dialysis Technician (may be called Extracorporeal Technician
Vectorcardiograph, Vasograph	Cardio-pulmonary Technician
Intermittent-Positive-Pressure Breathing Machine (Bennett Machine)	Pulmonary-Function Technician Respiratory Therapist
Radiation Equipment	Cobalt Technician Radiotherapy Technician Hyperbolic Chamber Technician
Computers and Data Processing	Program Analyst Systems Analyst Computer Operator
Artificial Sources of Radiation	Radiological Health Specialist

LEARNING ACTIVITY PACKAGE 25

Category:	Clinical Laboratory and Related Technical Occupations
Focus:	Dental Technology
Activity:	Field Trip: Dental Laboratory
Objective:	At the conclusion of this lesson, the student will demonstrate, through class participation, knowledge of some of the procedures of making dentures and will record on a worksheet some of the basic duties, skills, educational requirements, and employment and advancement opportunities for careers in dental technology.

EQUIPMENT, SUPPLIES, AND FORMS

1. Steps for Processing Dentures (see sample enclosed in this learning package)

2. Suggested overview demonstration materials: Complete dentures (tooth anatomy and carvings, model making, occlusion rims for dentures, articulations, full dentures); fixed bridgework; porcelain-fused-to-gold restorations; cast partial dentures; partial dentures

3. Field Trip Observation Form (see sample enclosed in the back of this notebook)

RATIONALE

The purpose of this field trip is to expose students to careers in dental technology. These occupations require on-the-job training, skill and accuracy, and interest in technical areas. It provides students with an opportunity to meet and talk directly with someone on the job and in a setting where the student can gain information and exposure not available in the classroom.

SUGGESTED PROCEDURES

There are general laboratories and dental labs which specialize in crowns, bridge work, partials, and other dental work. The larger the laboratory, the greater the probability that the work is specialized. In the smaller lab workers do a variety of tasks.

Demonstrations, illustrations and models help keep student interest high. If time and conditions permit, allow the students to observe procedures such as the pouring of dental molds.

This field trip can be one of the most interesting in the health cluster. There is a great deal to see, and practically every step of the process can be viewed by the students. Workers in dental laboratories seem naturally to do lots of demonstrations which add to the student's interest and response. Have the students read over the Steps for Processing Dentures Form before the field trip.

Additional information on dental technology can be obtained in Dental Laboratory Technology by Nicholas Martinelli (St. Louis: C.V. Mosby).

ALTERNATE ACTIVITIES

1. Invite a dental laboratory technologist to class to show students some of the tools (instruments) that they utilize in making and repairing dental prosthesis. A dentist could also demonstrate this to students.
2. In the next few years, insurance companies will be insuring dental services; when this comes about, more and more people will have dental services, such as partials and bridgework which are now prohibitive due to expense. This will increase the number of workers in the dental laboratory and the related dental careers. Have the students identify those specialties which will be expanding.

STEPS FOR PROCESSING DENTURES

1. Impressions brought in from dentist.
2. Four stone models (casts).
3. Make gutta perca or plastic base plate with bite-blocks (wax rims).
4. Return to dentist for bite registration.
5. Registration (biteblock and model) returned and sealed together with wax.
6. Mounted on articulator with plaster.
7. Registration removed and wax boiled from models.
8. Teeth selected for set-up according to dentist's instructions, then set up and waxed up to resemble finished dentures.
9. Returned to the dentist for "try-in" to check bite relationship, function and appearance.
10. Return to laboratory for finishing.
11. Palate of the model is post-damned (Bead across forament from humuler notches).
12. Cut out palate of upper base plate and seat base plates in their correct relationship on the model.
13. Waxed for finish.
14. Models and wax-ups removed from articulator, taken to plaster bench, where they are invested in the lower half of a flask. The investment is a mixture of stone or plaster. The technical name for this mixture is gympsum.
15. The undercuts are completely relieved with wax and the investment is painted with a waterglass separator (sodium solicate).
16. Top half of flask is placed on lower half of flask and the investment is poured just above the teeth.
17. This is painted again with the separator, and the rest of the flask is poured just above the teeth.
18. In approximately 20 minutes, investment will completely harden.
19. Now, the flask is placed in boil-out pan for a period of five minutes.
20. This process will soften inside wax and allow flask to be separated.
21. Model will be on the bottom half of flask. The teeth will be on the top half of the flask and then all the wax will be boiled out of the flask.
22. The top half is painted with another kind of separator.

23. The plastic (acrylic or menthylmethacrylate) is mixed up and in almost all cases, is mixed three parts powder, one part liquid. (The powder is polymer and the liquid is monomer).

24. In approximately five minutes, the mixture of powder and liquid will be doughy in consistency.

25. This is removed from jar and placed in tooth side of flask.

26. The lower half with model is covered with a thin sheet of plastic and pressed into upper half of flask under a pressure of approximately four to six thousand pounds per square inch. The flashing is trimmed. Then a final closure sheet of plastic is placed on model.

27. Flask is reclosed to six thousand pounds for a final pressure. Then removed from press and put in a spring compress (clamp) and then into a curing tank for an hour and a half.

28. Then, it is removed to boiling water for one-half hour.

29. Then removed and placed in room temperature water for 20 minutes.

30. Then they are removed and outer investment is broken away. The model is removed and then dentures are finished, using stone wheels of various grits and burs of various shapes (rotary files). The final finishing is done with sandpaper.

31. Then denture is taken to polishing machine where rag and brush wheels are used with pumics.

32. Denture is cleaned and taken to high shine machine. A rag wheel is used with a flannel buffing wheel.

33. Denture is cleaned in an ultrasonic bath of ammonia and water. This serves as a disinfectant.

34. Denture is returned to the dentist.

LEARNING ACTIVITY PACKAGE 26

Category:	Environmental and Public Health Occupations
Focus:	The Field of Public Health
Activity:	Resource Person/Student Activities
Objective:	At the conclusion of this lesson, the student will be able to complete a crossword puzzle and student worksheet on the types of careers and services offered in the field of public health.

EQUIPMENT, SUPPLIES, AND FORMS

1. Public Health: Preventive Care Means An Ounce of Prevention (see sample enclosed in this learning package)
2. The Field of Public Health: Puzzle Worksheet, Teacher's Key (see samples enclosed in this learning package)
3. Resource Person Information Sheet (see sample enclosed in the back of this notebook)

RATIONALE

The purpose of this activity is to expose the students to an overview of the careers and services offered in the field of public health. It will provide the students with an opportunity to meet and talk with someone dealing directly with the jobs and to gain information and exposure not normally available in the classroom.

SUGGESTED PROCEDURES

Students generally have little background and understanding of the field of public health; therefore, additional time is recommended to achieve this lesson's objective. The resource person may present an overview of the whole field or focus in-depth on a specific career or cluster of careers. The last part of the lesson is used for the students to complete the puzzle which will give them a list of the services and some of the careers in public health.

Resource persons working in a public health career in one of the following areas should be obtained for this lesson: population analysis, vital statistics, radiological health, disease control, lab diagnostic and sanitary bacteriology, rehabilitation and education, health finance, health statistics, health facilities, family health, federal programs, long-term care, or planning and construction.

ALTERNATE ACTIVITY

1. Invite speakers from city, county, state, or federal agencies in: communicable disease, immunization program, poison control, renal dialysis, family health, TB registry, venereal disease control, sanitary bacteriology, emergency medical service, or highway safety.

PUBLIC HEALTH: PREVENTIVE CARE MEANS AN OUNCE OF PREVENTION

Reading this information will give you an understanding of the philosophy and governmental boundaries of the field of public health. Preventive health care covers a wide variety of activities. Two basic types of prevention are: primary prevention which consists of taking the steps that actually prevent a disease from occurring such as immunization programs and environmental activities; and secondary prevention which includes early actions to minimize the possible seriousness of certain diseases. Examples of secondary prevention are screening programs for the early detection of TB, cervical cancer, and lead poisoning.

Primary prevention activities attempt to prevent diseases from occurring while secondary prevention strives for early disease detection and for prevention of any further damage from disease. Traditionally, these two types of prevention have been the work of public health agencies and have included both disease control and eradiction programs.

Primary Prevention: Interventions

Primary prevention alters conditions in the environment or in individuals so that a disease never develops. Preventive health activities designed to alter conditions are given the name interventions. The classic example of an environmental intervention involves John Snow (1813-1858), the father of modern epidemology (historically, the study of the distribution of disease in population). Snow successfully halted the ravages of an epidemic of cholera, often a fatal disease at the time, by removing the handle of London's Broad Street pump, thus making the cholera-contaminated water unavailable to the local residents. Although the bacterial cause and the chemical treatment of cholera were as yet unknown, Snow devised a simple but effective intervention: removal of the pump handle. Techniques today are, of course, much more sophisticated, but the basic idea of intervention remains the same.

Primary Prevention: Environmental Sanitation

The principle of altering the environment is the basis of environmental sanitation programs in the United States. These programs include filtration, disinfection, and fluoridation of water supplies to help prevent cholera, typhoid and dental decay; improved sewerage systems; pasteurization and control of milk to prevent certain types of TB; rat eradication to prevent plague; and mosquito control to prevent yellow fever and malaria.

Primary Prevention: The Individual And Immunizations

In addition to altering conditions in the environment, primary prevention programs also attempt to alter conditions within individuals so that specific diseases never develop. Primary prevention focuses on the individual through use of immunizations. These immunizations provide artificial stimulation of the human body so that it can resist diseases including smallpox, measles, typhoid, tetanus and many others. Before the development of widespread immunization programs, the only reasonable defenses against an epidemic of a communicable disease were often isolation and quarantine (keeping other people away from the home of the sick person).

Historically, many immunization programs have been compulsory for specific groups of people, especially school children. As new immunizations are discovered and as the threat of some diseases diminishes, required immunizations change. For example, Illinois school children are no longer routinely required to have smallpox vaccinations because cases of smallpox in the United States are now extremely rare. The chance of getting smallpox is now less than the likelihood of developing a bad reaction to the vaccination.

Changing Focus of Primary Prevention: Quality of Life

In the past, preventive health programs were primarily concerned with the prevention or early detection of health hazards. These hazards are still concerns, but the more subtle influences of the environment upon physical, mental and social factors in the quality of life are of increasing concern. The present aims of primary prevention are more complex and deal with both natural and human-made factors in the environment. They include: air pollution, contamination of food by pesticides, rundown housing, radioactive materials, and noise.

Changing Focus of Primary Prevention: Chronic Disease Prevention

Primary prevention of chronic diseases has also become more important in recent years, especially since methods to control many communicable diseases have been developed. Chronic diseases include those in which conditions and symptoms persist (e.g. diabetes) or recur throughout the individual's life (e.g. asthma attacks). Based on the knowledge that a single chronic disease may have multiple causes, a variety of approaches to chronic disease control have been developed. These activities include:

1. Environmental health services are available to prevent exposure to biological or physical pollutants that aggravate chronic conditions. For example, both industrial air pollutants and cigarette smoking aggravate emphysema, a chronic respiratory condition, and other respiratory diseases.

2. Communicable disease control is in effect to prevent chronic disabilities that might follow infections. A prime example is prevention of the disabling effects of polio by first preventing the disease.

3. Medical care for mothers during pregnancy and childbirth are provided to reduce the incidence of birth defects and the possibility of permanent disability in children.

4. Occupational health services are provided to prevent illness and injury that could leave workers chronically disabled. Examples include the elimination of health hazards such as chemical pollutants and fire hazards in factories and the use of safety devices such as safety shoes and glasses.

5. Genetic intervention is sometimes implemented to eliminate potentially chronic conditions in offspring, primarily through genetic counseling. This includes identifying parents who are most likely to produce children with certain birth defects and then explaining the situation and the possible choices to the parents.

Secondary Prevention

As described previously, secondary prevention in health care includes early action to minimize the potential seriousness of a disease. This early action usually takes two forms: 1) screening programs for early detection, and 2) if a disease is detected, early treatment to prevent any further damage caused by the disease process. To be useful, a screening procedure must be able to detect disease before the patient is aware of any symptoms and when quick treatment can alter the course of the disease.

Secondary Prevention: Single Screening Procedures

Historically, many screening programs have concentrated on mass screening to detect single, specific diseases. In general, the screening tests have been simple, cheap, reasonably accurate, and capable of uncovering a disease for which an effective remedy is available. Screening for pulmonary TB, often by chest x-rays given in mobile health vans, is a familiar example. Other mass screening procedures include regular vision, hearing, and dental exams for school children.

Some screening procedures are given routinely as part of a physical exam. Often the screening procedure is one that has been developed for a specific target group. For instance, adult women are routinely given pap tests to detect cervical cancer as part of the physical exam. Newborn infants are screened to detect a condition known as PKU, which if detected, requires immediate treatment.

Secondary Prevention: Multiphasic Exams

One of the recent developments in screening programs is the use of multiphasic examinations. The multiphasic exam is a technological advancement that makes it easy and inexpensive to perform numerous screening tests and lab analyses as part of a physical exam. Many of the procedures are automated (i.e. making use of time-saving laboratory equipment) and often make use of computer analysis of the results.

A multiphasic exam on an individual might include TB testing, blood testing for syphilis, blood sugar tests for diabetes, vision and hearing screening, blood pressure reading and a glaucoma test.

One use of automated, multiphasic exams is through the "health-hazard appraisal." In addition to analyzing the results of an individual's multiphasic screening tests, analyses of his/her social and historical data are made. Based on all of this data, risk factors for the individual are calculated. This information is used as the basis for counseling and for patient management. Hopefully this approach may result in greater motivation for an individual to take the steps necessary to improve his/her health.

Barriers to Preventive Health Care

Factors which make it difficult for an individual to obtain preventive health care services affect both primary and secondary prevention. They include:

1. High cost of services, based on the fact that many preventive services are not covered by insurance.
2. Distance to service and transportation difficulties.
3. Limited hours for scheduling appointments, especially for someone who is "well" and seeks service outside his/her working hours.
4. Fear that symptoms, if any, may indeed represent the onset of a dreaded disease.

Today's Challenges

Historically, our society has relied upon government for regulations, programs, and enforcement of primary prevention activities. The shopper who purchases a carton of fresh milk takes for granted the health safeguards such as pasteurization, inspection, and control enforced by the government.

This attitude of dependence on external (often governmental) control of our behavior complicates today's attempts to deal with expanded preventive health needs. For example, an individual may say that he or she wants stricter governmental control of air pollution. Yet that same individual may be unable or unwilling to give up cigarette smoking. Along with air pollution, cigarette smoking is a contributing factor in several chronic respiratory diseases. The same individual may also demand and expect that the Food and Drug Administration check and monitor food substances while he/she continues to indulge in "over-consumption."

Control of present-day chronic diseases (also including diabetes, hypertension or high blood pressure, and alcoholism) appears to demand major behavior changes at both individual and societal levels. The methods needed to bring about these changes are among today's major challenges in preventive health care.

Today's Emphasis

As discussed previously, past control of many communicable diseases was through government regulation and enforcement. With the development of new types of immunizations and wide-spread immunization programs, many of the old dreaded diseases such as polio are not as threatening. Therefore, many parents do not feel a pressing need to have their children immunized. As a result, the percentage of immunized and protected children has dropped. If this trend continues, there is a definite threat that potentially dangerous outbreaks can occur. Today's emphasis in preventive health care is through: information, education, motivation, and service.

Finding the motivational factors which contribute to personal responsibility and effective decision making in seeking preventive health care, whether it be immunization or changing life style habits to reduce the risk of chronic disease or eliminating health hazards in the environment, is today's major emphasis.

Select the appropriate word below to complete the Field of Public Health crossword puzzle.

Communicable
Dietary
Child
Home
Geriatric
Administrator
Industrial
Midwife
Family
Librarian
Nurse
Social
Vital
Engineer
Evaluating
Educator
Public Health
Protection
Control

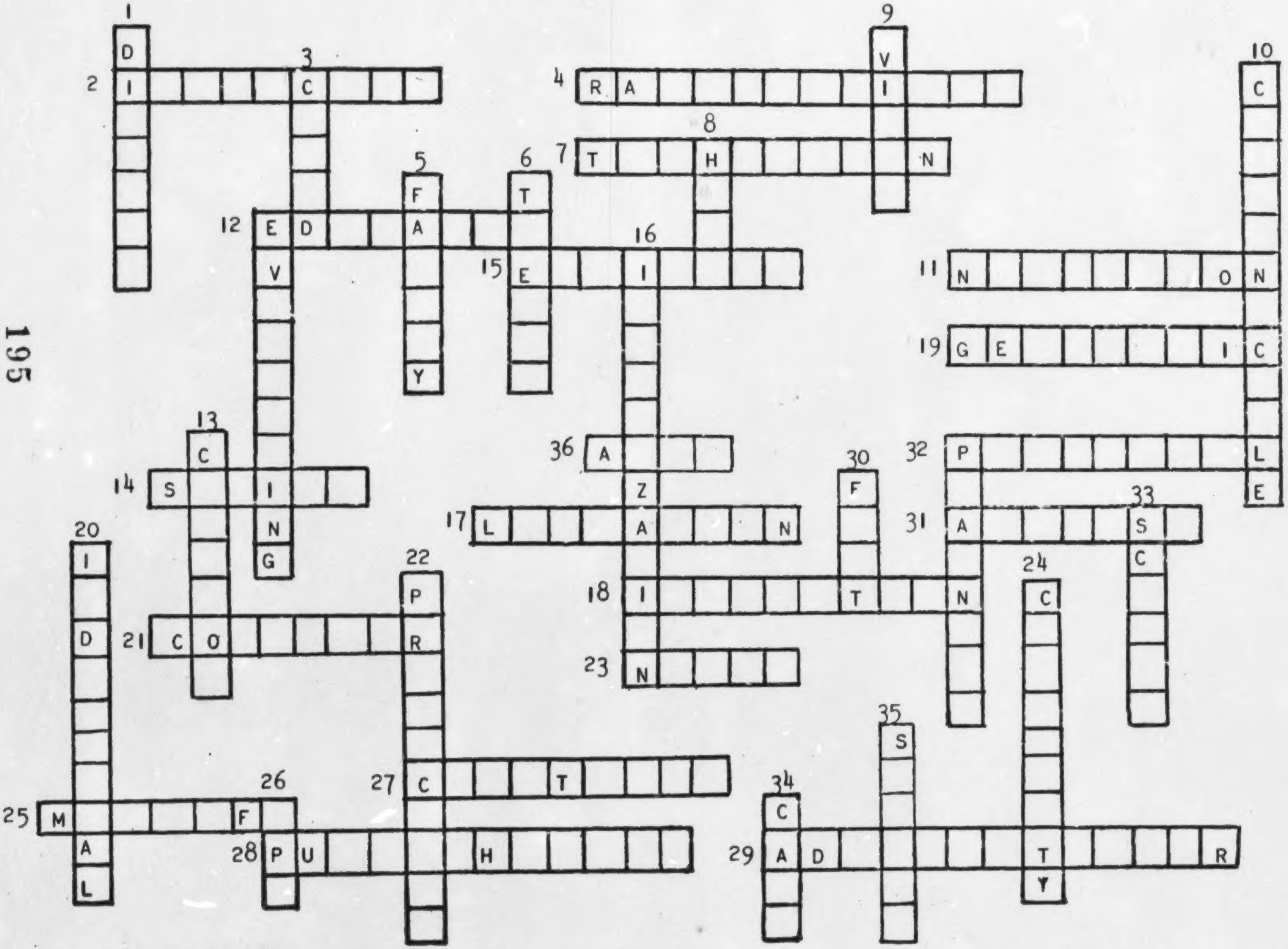
Social
Radiological
Inspector
Technician
Trends
Immunization
Inhalation
Aide
Care
Computer
Caretaker
Community
Fact
School
Planning
Analyst
Practical
Nutrition
EPA

THE FIELD OF PUBLIC HEALTH

Complete the crossword puzzle and print the corresponding word in the blanks. When completed, you will have a list of:

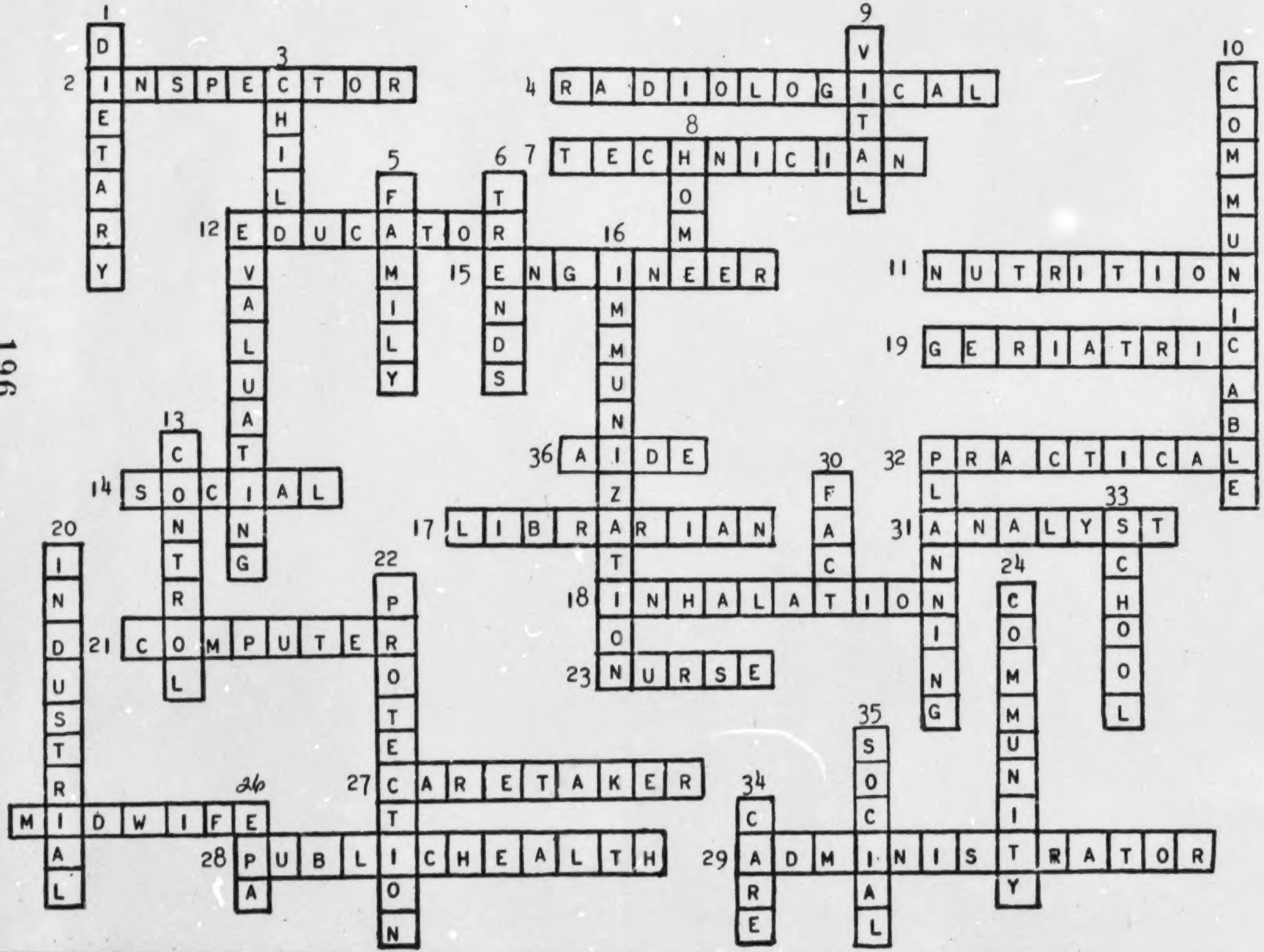
(DOWN)	TYPES OF SERVICES OFFERED	(ACROSS)	ENVIRONMENTAL AND PUBLIC HEALTH CAREERS
1	______________Counseling	2	Public Health Food______________
3	Maternal and______________Health	4	______________Health Specialist
5	______________Planning	7	Environmental______________
6	______________in Disease Patterns	11	______________Consultant
8	______________Health Care	12	Health______________
9	______________Statistics	14	______________Worker
10	Prevention of______________Diseases	15	State Sanitary______________
12	______________Health Services	17	Medical Records______________
13	Chronic Disease______________	18	______________Therapist
16	Mass______________	19	______________Home Inspector
20	Inspection of______________facilities	21	______________Programmer
22	Workers Health______________	23	Public Health______________
24	______________Health Protection	25	Nurse______________
26	Environmental Protection Agency_________	27	Animal______________
30	______________Finding	28	_________ _________Dentist
32	______________Health Services	29	Public Health______________
33	______________Health	31	Drug______________
34	Follow-up______________	32	Licensed______________Nurse
35	______________Services	36	Home Health______________

THE FIELD OF PUBLIC HEALTH



Teachers Key

THE FIELD OF PUBLIC HEALTH



THE FIELD OF PUBLIC HEALTH

Teacher's Key

Complete the crossword puzzle and print the corresponding word in the blanks. When completed, you will have a list of:

(DOWN)	TYPES OF SERVICES OFFERED	(ACROSS)	ENVIRONMENTAL AND PUBLIC HEALTH CAREERS
1	Dietary Counseling	2	Public Health Food Inspector
3	Maternal and Child Health	4	Radiological Health Specialist
5	Family Planning	7	Environmental Technician
6	Trends in Disease Patterns	11	Nutrition Consultant
8	Home Health Care	12	Health Educator
9	Vital Statistics	14	Social Worker
10	Prevention of Communicable Disease	15	State Sanitary Engineer
12	Evaluating Health Services	17	Medical Records Librarian
13	Chronic Disease Control	18	Inhalation Therapist
16	Mass Immunization	19	Geriatric Home Inspector
20	Inspection of Industrial facilities	21	Computer Programmer
22	Workers Health Protection	23	Public Health Nurse
24	Community Health Protection	25	Nurse Midwife
26	Environmental Protection Agency EPA	27	Animal Caretaker
30	Fact Finding	28	Public Health Dentist
32	Planning Health Services	29	Public Health Administrator
33	School Health	31	Drug Analyst
34	Follow-up Care	32	Licensed Practical Nurse
35	Social Services	36	Home Health Aide

LEARNING ACTIVITY PACKAGE 27

Category:	Administration, Business, and Clerical Occupations
Focus:	Administrative Services
Activity:	Resource Person/Discussion
Objective:	At the conclusion of this lesson, the student will be able to list and discuss in class at least two administrative duties and responsibilities that are basic to the job function of hospital administration.

EQUIPMENT, SUPPLIES, AND FORMS

1. Hospital Code of Ethics (see sample enclosed in this learning package)
2. Hospital Employee Information (see sample enclosed in this learning package)
3. Overview of Hospital Organization (see sample enclosed in this learning package)
4. Hospital Organization Chart (see sample enclosed in this learning package)
5. Resource Person Information Sheet (see sample enclosed in the back of this notebook)

RATIONALE

The purpose of this activity is to expose students to the various administrative departments, levels of workers, and the variety of careers available in a hospital. It provides students with an opportunity to meet and talk with someone dealing directly with the jobs and to gain information and insights not normally available in the classroom.

SUGGESTED PROCEDURES

Some of the best resource persons are administrative staff from personnel, business, public relations, auxiliary services, or hospital social services.

In addition to basic information about a specific hospital, the resource person could share information about his/her own job function within the organization. If it can be arranged, you might invite the director of personnel of the hospital to discuss the personnel requirements of the director of nursing services to discuss that aspect of the hospital's operation.

If an organizational chart of the hospital is available, display the chart and explain how the various departments are interrelated. If such a chart is not available to you, construct one of your own. In general, the responsibilities for hospital operations are divided into three categories: administrative, business management, and patient care. All hospital personnel and the departments to which they belong fall into one of these three broad categories which can be graphically represented on the organizational chart.

- In discussing the hospital's organization, include a general description of the functions of each group of employees mentioned in the chart. Include the names of personnel of various departments with whom you will have contact. It might be helpful to describe the uniforms that some personnel will be wearing.

The typical hospital organization chart included in this lesson is for your use as a guide in explaining and discussing the organizational arrangement of the hospital.

Also included in this package are samples of the types of rules which a hospital might make for all employees. Have the students discuss the rules; the reasons behind whether any workers might be exempt from obeying them and why that would be true; whether the students agree or disagree and why. Ask students for rules that they feel would result in better care and a smoother running hospital.

The teacher should be prepared to share with students examples regarding extremes in poor and excellent health care delivery. This can lead to a very worthwhile discussion.

ALTERNATE ACTIVITIES

1. Obtain a list of the departments and services offered by the hospital; describe and discuss with the students the departments, sections, and functions. If time permits, describe and display types of forms, rules, regulations and responsibilities of workers in different areas.
2. Invite a nursing home administrator to describe the administrative function in the nursing home.

HOSPITAL CODE OF ETHICS

Information about a patient is confidential. This simple rule is so important that a code of ethics by the American Hospital Association and the American College of Hospital Administrators (Code of Ethics, American Hospital Association, Revised 1964) makes special reference to the standard of conduct expected of hospital personnel regarding all information about patients:

> "The hospital organization and its individual employees jointly share the responsibility for the best possible care of the patient. To fulfill this obligation, the hospital and the employees are both charged with certain reciprocal ethical obligations... Employees are obliged... to safeguard confidential information regarding patients and the hospital; to avoid gossip and public criticism of the hospital; to develop a spirit of mutual friendliness with fellow workers, and to be courteous to the public."

The hospital administrator sets the example for all personnel in putting the welfare of the patient above all else and in following the code of ethics, which states:

> "The administrator should respect the safeguarding of confidential information about patients and should impress others with appreciation for this essential right of every patient."

Information acquired in a doctor-patient relationship is considered as confidential or privileged communication and may not be disclosed by the physician, except under special circumstances. Laws govern the release of a hospital's medical records and, although the medical record is kept for the benefit of the patient, the physician and the hospital, it is the property of the hospital. Therefore, the hospital may restrict the removal of the record from the record file room and from the hospital premises, determine who may have access to it, and define the kind of information that may be taken from it. (Guide To The Organization of a Hospital Medical Record Department," American Hospital Association, 1962).

A few basic rules about confidentiality will demonstrate the simplicity of maintaining a proper relationship with patients, hospital staff, and visitors:

1. All information about a patient is confidential. Never discuss one patient with another patient; never discuss any patient's personal disclosures with friends or fellow staff members.
2. No information about patients may be given out to telephone callers or visitors. All such inquiries should be referred to the charge nurse or nursing supervisor.
3. All requests from patients for equipment or care must be relayed to the charge nurse. You are not authorized to handle such a request yourself.
4. All complaints from patients and visitors must be relayed to the charge nurse. Never ignore any complaints, no matter how trivial or unreasonable they may seem to you.
5. The charge nurse is responsible for implementation of doctor's orders. Some patient's activities are limited by these orders.

HOSPITAL EMPLOYEE INFORMATION

1. MISCELLANEOUS REGULATIONS
   - Locker assignment and use
   - Permission to leave during working hours
   - Policy for lost and found items

2. TIME ASSIGNMENTS
   - Tour of duty and hours
   - Off-duty days
   - Use of the time clock

3. SALARY ADMINISTRATION
   - Wage scales
   - Payday: time and place
   - Cashing personal checks
   - Payroll deductions
   - Salary differentials for various tours of duty
   - Overtime pay
   - Increases in salary

4. APPEARANCE
   - Regulations on uniforms
   - Identification badges
   - Laundering of uniforms
   - General cleanliness and good grooming

5. MEALS
   - Meal hours and relief periods
   - Cafeteria hours and prices
   - Coffee shop hours and prices
   - Assigned coffee breaks and rest periods

6. PERSONAL HEALTH
   - Physical examinations
   - Employee health service
   - Use of outpatient or clinic facilities
   - Sick leave
   - Absence from work because of illness, including going off duty because of illness and reporting ill from home

7. EMPLOYEE BENEFITS
   - Vacations
   - Holidays
   - Hospitalization and medical insurance
   - Pension and retirement plans
   - Social security and unemployment compensation insurance
   - Pharmacy prescriptions
   - Leaves of absence, with pay and without pay

8. JOB STATUS IMPROVEMENT
   - Transfers
   - Promotions

9. TERMINATION OF EMPLOYMENT
   - Dismissals, including causes for dismissal and regulations concerning salary and benefits
   - Resignations, including length of notice required and whether notice must be in written form

10. PERSONNEL RECORDS
    - Applications
    - Incident reports
    - Performance evaluations
    - Letters of resignation
    - Changes of address, marital status, and dependents
    - Health record

11. PERSONNEL MANAGEMENT
    - Causes for disciplinary action
    - Grievance procedures
    - Personnel committee
    - Union affiliation

12. PERSONAL CONDUCT
    - Smoking regulations
    - Confidential information
    - Hazards of noise
    - Other unprofessional behavior such as shouting, loud singing, whistling, and gum chewing

OVERVIEW OF HOSPITAL ORGANIZATION

ADMINISTRATION

1. Describe how the hospital is governed, i.e., by committee, board, or other group, and explain the duties and responsibilities of the governing group. Consider the following:

   Who establishes general policies
   Approval of the budget
   Appointment of the hospital director

2. Discuss the role of the hospital director or administrator, by pointing out:

   The role of the chief administrator
   Example of a day's activities of a hospital administrator.

3. Explain how the assistant directors:

   Assist the director with hospital operations and supervise activities of the various departments
   Assist in the administrative duties during the evening and night shifts

BUSINESS MANAGEMENT

1. Accounting Department

   Keeps patients' accounts, bills patients for services, and collects fees
   Prepares payrolls for hospital employees and pays other hospital expenses

2. Purchasing and Supply Department

   Contracts for all necessary equipment and services
   Issues the equipment and provides services to hospital departments and authorized personnel on request

3. Maintenance Department

   Maintains systems of supply to the hospital for heat, power, light, water and gas
   Maintains and keeps hospital building and equipment in repair
   Maintains hospital grounds

4. Housekeeping Department

   Performs all heavy cleaning tasks in all areas of the hospital
   Aids other departments with light housekeeping when necessary

5. Laundry Department

    Launders all linens supplied
    Launders all uniforms supplied by the hospital

6. Telephone Service Department

    Processes all incoming and outgoing telephone calls
    Provides messenger services, as necessary

PATIENT CARE

1. Department of Professional Services (includes all attending physicians)

    Directs medical care of private patients
    Directs activities of all interns and residents
    Exchanges consulting services regarding patients

2. Medical Education Department (includes intern, resident, and medical students)

    Plans educational programs for medical personnel training in the hospital
    Provides clinical experiences for students

3. Department of Technical Services

    The occupational therapy section provides handicraft activities for patient rehabilitation and restoration of skills
    The physical therapy section provides supervision and instruction in physical activities and exercises to help patients to maintain or recover lost body functions
    The respiratory therapy section provides special lung treatment
    The cardiology section performs electrocardiograms for patients
    The radiology section performs x-rays and provides cobalt therapy
    The diagnostic laboratories perform a great variety of tests to help in the detection of illness or to allow its progress

4. Medical Records Department

    Collects and files chart records of all patients treated
    Completes forms to be filed with charts when required

5. Patient Admission and Discharge Departments

    Arranges all hospital admissions
    Processes all patients admitted to the hospital
    Processes all patients discharged

6. Dietary Department

Prepares all food to be consumed by patients and hospital personnel
Delivers meals to floors and collects trays after meals
Prepares special diets ordered for patients

7. Social Service Department

Aides patients with family and domestic problems
Refers patients who are unable to pay for medical care to the proper agencies

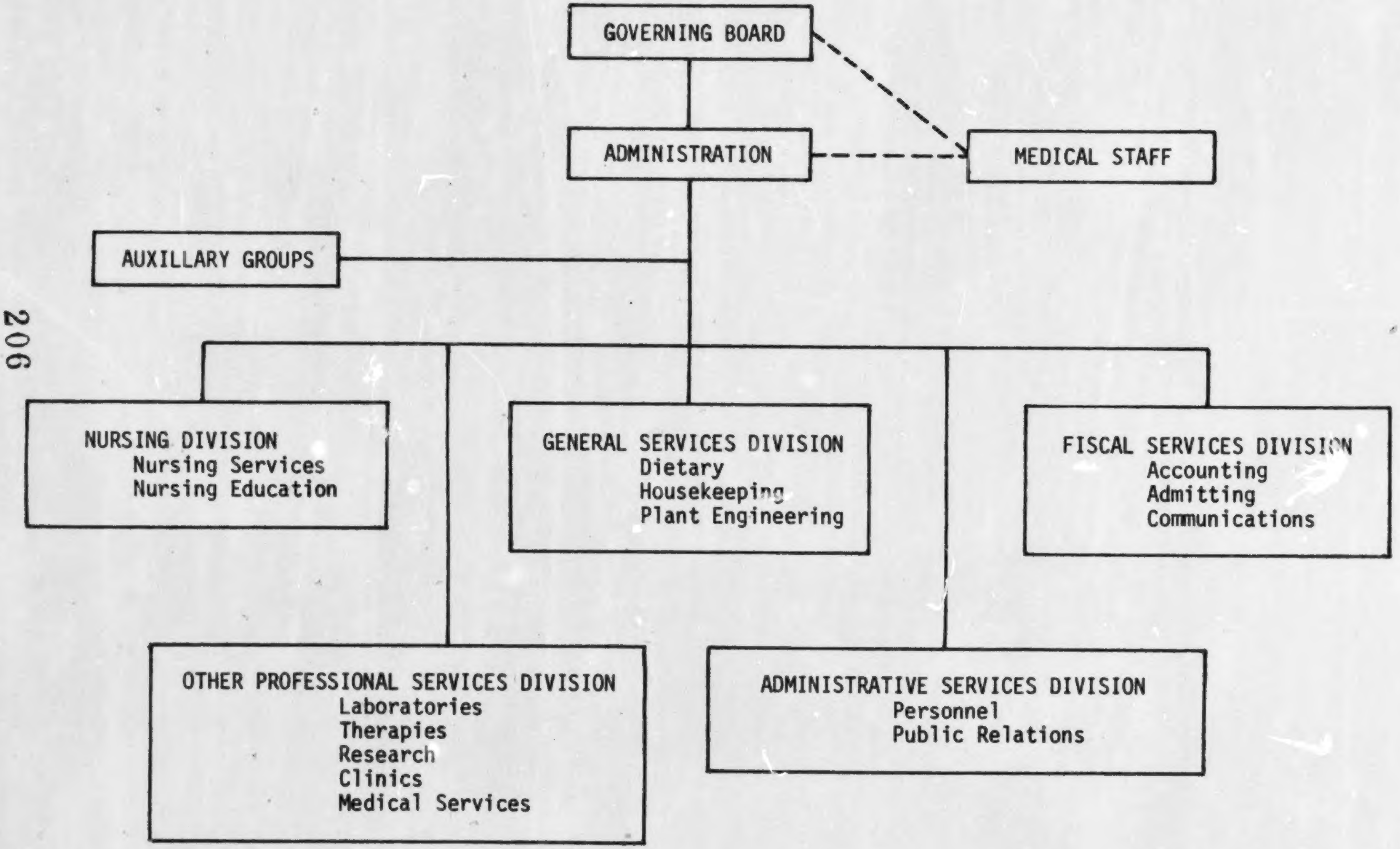
8. Pharmacy

Orders and supplies medications necessary for the treatment of patients to all hospital departments and nursing units

9. Inservice Nursing Education Department

Plans, in cooperation with faculty of nursing school, for educational programs for student nurses
Conducts training and orientation programs for nursing personnel

HOSPITAL ORGANIZATION CHART



LEARNING ACTIVITY PACKAGE 28

Category:	Administration, Business and Clerical Occupations
Focus:	Medical Records Occupations
Activity:	Rules of Medical Records Maintenance
Objective:	At the conclusion of this lesson, the student will be able to describe on a worksheet the types of medical record forms used by workers in health occupations and list the rules governing medical records.

EQUIPMENT, SUPPLIES AND FORMS

1. Medical Records (see sample enclosed in this learning package)
2. Surgical Records (see sample enclosed in this learning package)
3. Medical Transcriptionist (see sample enclosed in this learning package)
4. Medical Record Technician (see sample enclosed in this learning package)
5. Health Planning Guide, A.H.E.S. Project
6. The Hospital Ward Clerk, Ruth Perkin Stryker, The C.V. Mosley Co., St. Louis, MO
7. Training the Ward Clerk, Hospital Research & Ed. Trust, 840 N. Lake Shore Drive, Chicago, IL 60611

RATIONALE

The purpose of this lesson is to familiarize the student with the keeping of medical records used in the health industry.

SUGGESTED PROCEDURES

Each student is to have copies of the Medical Records, Surgical Records information sheets.

Obtain copies of these blank forms from a local hospital and/or nursing home: forms required on the surgical records, consent for surgery form, and anesthetic and recovery room forms.

The students, working in groups of two or three, are to answer the following questions in writing and compare results with other groups.

1. List three types of medical records forms.
2. List three types of medical forms used in a hospital records department.
3. List 15 kinds of data (information) kept on medical records.
4. List 10 types of medical records that might be kept when someone has an operation.
5. Name three careers where the job title involves record keeping.
6. Name five health occupations that do medical record keeping as a part of the job.
7. Why is the keeping of medical records so important?
8. Name three locations in a hospital where medical records are kept.
9. Name three places, other than hospitals, where medical records are kept.

ALTERNATE ACTIVITY

1. The students are to work in groups of four to compose one sentence summaries for the following questions: Why medical records?, When are medical records used?, Who uses medical records?, How are medical records used?, How many types of medical records are there?, How many ways are there to record and store medical information?, Where are medical records stored? Hand the information sheets out two-thirds of the way through the period. This gives the student time to check, correct, find out or add to the summary answers.

MEDICAL RECORDS

A medical record (frequently referred to as the chart by health workers) is a permanent document given a complete and unbroken account of a person's illness or injury and of all that is done for that person medically while he/she is in the hospital or other health facility.

A medical record would include the following kinds of information: when and how the condition first came to medical attention; how the diagnosis was arrived at; how the condition was treated; what operation was performed and the outcome; the schedule of treatments; the tests that were made; the course of the patient's condition during the hospital stay.

These observations and findings originate from many sources including the physician, nurse, laboratory personnel, and other professional members of the staff and through a network of written communications, records, and reports from all the hospital departments.

The medical record is indispensable for diagnosis and treatment. It is also invaluable as a source of information for the verification of legal claims, statistical charting of health trends, and medical-scientific research.

The patient care record cards, one for each patient, are placed in the inserts with the identifying information (patient's name, room number, etc.) visible at the bottom of the card. Each card can be flipped upward to expose the additional information on a particular patient.

The patient care record card is often used to construct staff patient care assignments, to give change-of-tour reports, and to check on specific orders for a patient.

SURGICAL RECORDS

A patient admitted to a hospital for surgery will have many specialized records in his/her chart before he/she is discharged.

Prior to surgery, an "operation consent" must be signed by the patient, giving the surgeon permission to perform the operation. Two more records are added in the operating room: one is to record the anesthesia given and the general progress of the operation and patient during surgery; another describes the operative procedures performed.

If tissue is removed for laboratory examination a third record, surgical pathology, is added to the chart. In the recovery room, a record is kept of the patient's condition while he/she is awakening from the anesthetic. This is often called the postoperative record. A vital signs sheet, with graphs for the blood pressure, pulse, and respiration during this time may be substituted for the postoperative record, or may be used with it. If a patient has had major surgery, an intake and output record, used primarily to record intravenous and oral intake and urinary output, is often added.

MEDICAL TRANSCRIPTIONIST

Qualifications and Education

Accuracy and speed in typing technical and often complex medical information are necessary for effective medical transcription. Many transcriptionists begin work as medical transcriptionists with no formal training in the typing of medical records. They receive on-the-job experience in learning the necessary terminology. An alternative way of becoming a medical transcriptionist is the two-month correspondence course offered by the American Medical Record Association.

Work Place

Medical transcriptionists work in hospitals, clinics, and nursing homes. The records they transcribe are used for emergency and follow-up treatments by physicians and other health care personnel, by insurance companies, and by other health care institutions and agencies.

Duties and Responsibilities

The medical transcriptionist types written and recorded medical records. The transcriptionist works with the medical records administrator and medical records technician in the preparation and maintenance of accurate patient records. The transcriptionist must type medical dictation, understand medical terms, and know how to interpret medical reports.

Professional Organization Where Further Information Can Be Obtained

American Medical Record Association
875 North Michigan Avenue
Suite 1850
Chicago, IL 60611

Reading On Medical Record Administration

Medical Record News, journal published by the American Medical Record Association.

MEDICAL RECORDS TECHNICIAN

Formal Preparation, Qualifications and Education

Since the medical records technician's work consists largely of keeping accurate records, she/he must be able to handle large amounts of information without making mistakes. Such office and clerical tasks require patience. In order to be reasonably satisfied with medical records work, one should enjoy and have ability in performing clerical tasks involving considerable detail and requiring a high degree of accuracy.

There are three educational routes to become a M.R.T. The most common method is completion of a two-year program in a community college. Less common, is the one-year course offered by a few hospitals and community colleges (there are no such programs in Illinois). Finally, the American Medical Record Association offers a correspondence course enabling the high school graduate to become a medical records technician.

Employment and Income

Medical records technicians may assume greater responsibility and receive salary increases without further education. Those desiring to be medical records administrators may return to college to finish a bachelor's degree in medical records or a bachelor's degree in another field and then enroll in a one-year, hospital-based certificate program in medical records administration. Some hospitals provide financial assistance to their medical records technicians who wish to further their educations.

Work Place

The medical records technician works in the medical records department of a hospital, nursing home, or clinic. Like the medical records administrator, the medical records technician must maintain accurate records of patients. This information is needed by patients, physicians, insurance companies, health care facilities, and in cases of federal health programs like Medicare, the federal government.

Duties and Responsibilities

Medical records technicians in smaller health care facilities will probably perform a wide range of tasks while those in larger hospitals may specialize in only two or three aspects of medical records work. Among the duties the medical records technician may perform are: filing, typing medical reports, compiling statistics, and supplying health information to other persons or agencies.

RESOURCE PERSON INFORMATION SHEET

Resource Person: ______________________________ Date: __________

Occupational Area: ______________________ Your Name: _______________

NOTE TO STUDENT: You are required to complete one of these forms for every resource person visiting our class. In order to receive credit, be as thorough as possible.

1. List typical jobs within the occupational area:

2. Job responsibilities:

3. Working conditions:

4. Personality traits needed for occupational area:

5. Education and/or training required:

6. Advantages and disadvantages of occupational field:

7. Advancement opportunities in this occupational field:

8. Salary range (approximate starting to estimated maximum):

9. Your personal reaction to this occupational area as described by the speaker:

10. Describe your reaction to this speaker and make recommendations for improvement:

FIELD TRIP OBSERVATION FORM

Student Name ______________________________

I. Job title ______________________________

II. Description of major job duties (please list).

A. ______________________________

B. ______________________________

C. ______________________________

D. ______________________________

E. ______________________________

III. Job characteristics. Check those which apply to a worker in this occupation.

___ A. Able to see physical results of work.
___ B. Competitive — must compete for advancement.
___ C. Directs activities of others — supervisory.
___ D. Helps people.
___ E. High level of responsibility.
___ F. Motivates others — must have ability to influence others.
___ G. Repetitious work.
___ H. Requires physical stamina.
___ I. Self-expression is encouraged.
___ J. Closely supervised by superiors.
___ K. Works with technical data.
___ L. Works with people.
___ M. Works alone.
___ N. Manual skills required.

IV. Educational requirements.

A. Check level required for this occupation.

___ 1. High school education desirable.
___ 2. High school education required.
___ 3. Junior college or trade school.
___ 4. Four year college — baccalaureate.
___ 5. Advanced degree — master's.
___ 6. Advanced degree — doctorate.

B. Where can this education be obtained? Name one or two schools or industries where training is available (addresses, if available).

____

____

C. List the course or subject areas one would need to study for this job.

____

____

____

____

D. How many years of experience and what type of training is needed before entering this occupation?

____

____

____

V. Employment opportunities.

A. List employers in your area who employ people for this job.

____

____

B. What starting wage or salary could one expect? __________

C. How are wages determined?

Union ___ Individual contract ___ Salary schedule ___

D. What position could a person advance to after experience is obtained?

____

E. How much pay would you expect to receive in this advanced position? ____________________________________

F. What are some of the fringe benefits of this occupation?

____

VI. Job requirements.

A. Is a license or union membership required? ____________

B. What must a person do to qualify for this license or membership?

____

C. Where can this license or membership be obtained?

____

D. Is bonding necessary? ________________________

E. Are tools required? __________________________

F. Do employees buy uniforms? ____________________

VII. Working conditions. Check those which apply to this occupation.

___ A. Overtime required.
___ B. Outdoor work.
___ C. Indoor work.
___ D. Hazardous conditions (specify). ______________
___ E. Variety of jobs.
___ F. Seasonal work.
___ G. Travel required.
___ H. Unusual working hours.
___ I. Dusty or noisy conditions.

VII. Where can additional information about this occupation be obtained?

____

____

____

INTERVIEW QUESTIONS

The following is a list of questions which could be used when interviewing people about their occupation. This list is not complete and is intended to be used as a "helper" in thinking up other questions.

1. Why did you pick this job?
2. How did you get started in your occupation?
3. How did you choose your place of training?
4. What educational, training, and other qualifications are there for the job?
5. If you should wish to change jobs, would the training contribute in any way?
6. Do you think this job would have a good future for me?
7. How could I get started in this career?
8. What is the salary range of this occupation?
9. What could a beginning person expect to make?
10. What are the fringe benefits?
11. Do you get paid vacations?
12. Do you have medical insurance?
13. Is there any chance of being laid-off? If so, how many times a year?
14. What sort of planning does this business have for retirement?
15. What do you or don't you like about your job?
16. What are the advantages?
17. What are the disadvantages?
18. What are the hours and working conditions?
19. Do you ever have to work holidays? If so, which ones?
20. Do you ever work on weekends?
21. Is there a special uniform you must wear, or are you free to wear what you want? Does the company provide the uniform or does the employee?
22. What tools do you need?
23. Do you have to buy your own equipment?
24. What are the physical requirements?
25. What do you do in this occupation?
26. How much traveling is involved?
27. What kinds of people do you work with?
28. Is there any chance for advancement?

29. What are your responsibilities?

30. Do you belong to a union?

31. What's a typical day like for you in this job?

32. Is there any on-the-job training?

33. Has there ever been a time when you couldn't stand your job? If so, why and when?

34. Do you have to move if the company does?

35. What work experience did you have before you started to work in this occupation?

36. Who depends on your work? Upon whom do you depend?

37. Are there opportunities for advancement in this job? If so, what are the requirements for advancement?

38. How does your job affect your personal life?

39. What kinds of people do you meet?

40. Do you work mainly with people or things?

41. Do you work a lot with ideas?

42. Does your job offer opportunities to be creative?

43. Are people with your kinds of skills usually needed - even when business may be bad?

44. Is your work at all seasonal?

45. Could you briefly describe the personal qualities a person would need to do your job - strength, height, agility, ability to think rapidly, ability to make decisions, ability to deal with other people, etc.?

46. Would you recommend this kind of work for your children?

47. How do you spend your time after work?

48. If you could have any job in the world, what would you like to be?

49. Do you still go to school for special training?

50. When are people promoted? When are people fired?

OBSERVATION/INTERVIEW FORM

NOTE TO STUDENT: These experiences are to be completed outside of class. You will need to select several people to observe and interview about different jobs. Don't use the same people or jobs that were used for the questionnaires. Check with the teacher before doing the observation/interviews. Make an appointment with the person to be observed and interviewed. Don't just walk into a place and try to complete the assignment. In setting up the appointment, explain that you are doing this as a careers class assignment. Tell the worker that you will need to observe him/her working for 1/2 hour, then interview him/her briefly to complete the form. Ask what would be this person's best time. Do it at his/her convenience. While observing the worker you are recording what you observe in Part I - Observing. . . . Then on to the interview portion of the assignment.

YOUR NAME ______________________ COMPANY ______________________

DATE ______________________ NAME OF EMPLOYEE ______________________

OCCUPATION ______________________

PART I: INFORMATION GATHERED DURING OBSERVATION

1. Job responsibilities:

2. Working conditions:

3. Personality traits needed for this occupation:

4. How worker is treated by customers (if applicable):

5. How worker is treated by coworkers:

6. How worker is treated by supervisor:

7. Advantages and/or disadvantages of occupation you have observed:

8. Describe your likes/dislikes of occupation observed:

PART II: INFORMATION GATHERED DURING INTERVIEW

NOTE TO STUDENT: After observing the worker for 1/2 hour, take a few minutes to talk with him/her about the questions on Part II - Interviewing. Record the worker's responses accurately. When you have finished with the interview, get the worker's signature and date. Thank him/her, and you are finished. (You'll also need to sign this form.) Be sure to schedule the Observation/Interview so that it's at a good time in the worker's day.

1. Job responsibilities you have:
2. Working conditions of your job:
3. Personality traits you find helpful in your job;
4. How you are treated by your customers:
5. How you are treated by your coworkers:
6. How you are treated by your supervisor:
7. Advantages and/or disadvantages you can see in your job:
8. What do you like/dislike about your job?

Employee's Signature ______________________

DATE: ______________________

Company: ______________________

Student Signature: ______________________

REFERENCES FOR HEALTH OCCUPATIONS

BOOKS

Careers in Therapy, Medical Technology and Nutrition

Gordon Lebowitz, copyright in 1974 by Fairchild Publications, Inc.

Cumulative Career Index

1973-74, An Annual Compilation with Quarterly Supplements, Copyright in 1974 by Chronical Guidance Publications, Inc., Moravia, NY 13118.

Dental Laboratory Technology

Nicholas Martinelli. The C.V. Mosby Co., 1970, St. Louis, MO

Dictionary of Occupational Titles (DOT).

Third edition, two volumes; Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Health Careers Film Guide

Survey of entire health career film field organized according to profession and occupation giving brief description of contents. Films are available on free loan basis or may be purchased or rented from the distributors. For sale by the Superintendent of Documents, U.S. Printing Office, Washington, D.C. 20402
Stock Number 1741-00047 - Price 35 cents.
OR, Office of Information, Bureau of Health Manpower Education, National Institutes of Health, Bethesda, MD 20014.

Health Careers Planning Guide

Prepared by Area Health Education System, Illinois Office of Education, Media and Resource Center, 100 North First Street, Springfield, IL 62777.

Health Occupations at the Secondary Level

A guide for teachers and administrators, State of Illinois Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, 100 North First Street, Springfield, IL 62777.

Learning Medical Terminology, Step-by-Step

Young, Clara Gene, and Barger, James D.; C.V. Mosby Company, 11820 Westline Industrial Drive, St. Louis, MO 63141.

Medical Terminology

A programmed Text, Second Edition, Copyright 1963, by John Wiley & Sons, Inc.

Medical Terminology

Brady's Programmed Orientation; J.B. Lippincott, East Washington Square, Philadelphia, PA 19105 - 1970.

Mini-Units for Health Career Exploration
Mini-Units for Health Education
Mini-Units for Valued Education
How To Study Multi-Media Unit

All from Channing L. Bete Co., 45 Federal Street, Greenfield, MA 01301

Nursing and Allied Careers

Gordon Lebowitz, copyright in 1973 by Fairchild Publications, Inc.

Occupational Outlook Handbook

1974-75 Edition
U.S. Department of Labor, Bureau of Labor Statistics
For sale by Superintendent of Documents
U. S. Government Printing Office
Washington, D.C. 20402.

Radiologic Technology - A Future for You

T. J. Jackson, M.H.A. copyright in 1974 by The Tiresias Press, Inc.

Taber's Cyclopedic Medical Dictionary

10th Edition, Illustrated, 1968 by Clarence Wilber Tabor
F.A. Davis Company, 1914-16 Cherry Street, Philadelphia, PA 19103.

The Hospital Ward Clerk

Ruth Peris Stryker, C.V. Mosby Co., St. Louis, MO

Training the Ward Clerk

Hospital Research and Education Trust, 840 North Lake Shore Drive,
Chicago, IL 60611.

YOU, and a Health Career

Gordon Lebowitz, published by Fairchild Publications, Inc.

Yellow Pages of Learning Resources

Copyright 1972 by GEE: Group for Environmental Education, Inc.,
1214 Arch Street, Philadelphia PA 19107.

PERIODICALS

Career Opportunities in Pharmacy

American Association of Colleges of Pharmacy
Office of Student Affairs, 8121 Georgia Avenue, Suite 800,
Silver Springs, MD 20910.

Career World Magazine

Publication and subscription offices: Curriculum Innovations, Inc.,
501 Lake Forest Avenue, Highwood, IL 60040

The Health Careers Pathway Series

#9 Health Careers Council of Illinois
400 North Michigan Avenue, Chicago, IL 60611

FILMS

World of the Right Size

Is A Career In The Health Services For You?

Is A Career as a Technician for You?

Loan from: Illinois Office of Education, Media and Resource Center,
100 North First Street, Springfield, IL 62777

Introduction to Health Careers (11 minutes)

Exploring Health Career (28 minutes)

Free of charge from: Illinois Hospital Association, 840 North Lake
Shore Drive, Chicago, IL.

Mr. Galen Comes to Town (28 minutes)

But More Than This (29 minutes)

The Heritage of Operating Room "D" (27 1/2 minutes)

Code Blue #4409, Emphasis on Minority Representation in Health Manpower

Available from: Modern Talking Picture Service, Inc., 1212 Avenue
of the Americas, New York, NY 10036

RESOURCES FOR HEALTH OCCUPATIONS CAREER INFORMATION

Alexander Graham Bell Association
for the Deaf
1537 35th Street, NW
Washington, DC 20007

American Academy of Family Physicians
Volker Boulevard at Brookside
Kansas City, MO 64112

American Academy of Pediatrics
1891 Hinman Avenue
Evanston, IL 60204

American Association of Colleges of Pharmacy
8121 Georgia Avenue
Silver Springs, MD 20910

American Association for Gifted Children
15 Gramercy Park
New York, NY 10003

American Association for Health, Physical
Education and Recreation
1201 16th St. NW
Washington, DC 20036

American Association for Inhalation
Therapy
3554 Ninth St.
Riverside, CA 92501

American Association of Medical Assistants
200 East Ohio Street
Chicago, IL 60611

American Association of Nurse Anesthetists
111 East Wacker Drive
Suite 929
Chicago, IL 60601

American Association of Ophthamalogy
1100 17th Street, NW
Washington, DC 20036

American Association for Respiratory Therapy
7411 Himes Place
Dallas, TX 75235

American College of Hospital
Administrators
840 North Lake Shore Drive
Chicago, IL 60611

American College of Nurse Midwives
1000 Vermont Avenue, NW
Washington, DC 20005

American College of Obstetricians
and Gynecologists
79 West Monroe
Chicago, IL 60603

American Dental Assistants
Association
211 East Chicago Avenue
Chicago, IL 60611

American Dental Association
211 E. Chicago Avenue
Chicago, IL 60611

American Dental Hygienists'
Association
211 East Chicago: 1616
Chicago, IL 60611

American Diabetes Association, Inc.
18 East 49th Street
New York, NY 10017

American Dietetic Association
620 N. Michigan Avenue
Chicago, IL 60611

American Foundation for the Blind
15 West 16th Street
New York, NY 10011

American Genetic Association
1507 M. Street, NW
Washington, DC 20005

American Heart Association, Inc.
44 E. 23rd Street
New York, NY 10010

American Hospital Association
840 N. Lake Shore Drive
Chicago, IL 60611

American Medical Association
Bureau of Health Education
535 N. Dearborn Street
Chicago, IL 60610

American Medical Record Association
875 North Michigan Avenue: 1850
Chicago, IL 60611

American Nurses' Association
2420 Pershing Road
Kansas City, MO 64141

American Occupational Therapy Association
251 Park Avenue, South
New York, NY 10010

American Optometric Association
7000 Chappewa
St. Louis MO 63119

American Orthotic Council
3400 Massachusetts Avenue
Washington, DC 20007

American Osteopathic Association
212 East Ohio Street
Chicago, IL 60611

American Personnel and Guidance
Association
1607 New Hampshire Ave., NW
Washington, DC 20009

American Pharmaceutical Association
2215 Constitution Avenue, NW
Washington, DC 20037

American Physical Therapy Association
1156 15th Street, NW
Washington, DC 20005

American Podiatry Association
20 Chevy Chase Circle, NW
Washington, DC 20005

American Psychiatric Association
1700 18th Street, NW
Washington, DC 20009

American Psychoanalytic Association
One E. 57th Street
New York, NY 10022

American Psychological Association
1200 17th Street, NW
Washington, DC 20036

American Public Health Assoc., Inc.
1740 Broadway
New York, NY 10019

American Society of Medical Technologist
555 West Loop South, Suite 200
Bellaire, TX 77401

American Speech and Hearing Assoc.
9030 Old Georgetown Road
Washington, DC 20014

Association of American Medical Colleges
One DuPont Circle, NW, Suite 200
Washington, DC 20036

Association of Medical Illustrators
Medical College of Georgia
Augusta, GA 30902

Association of Operating Room Nurses,
Inc.
The Denver Technological Center
8085 E. Prentice Avenue
Englewood, CO 80110

Association for Physical and
Mental Rehabilitation
1472 Broadway
New York, NY

Association of Schools of Public
Health
1825 K Street, NW, Suite 707
Washington, DC 20006

Association of University Programs
in Hospital Administration
Suite 420
One DuPont Circle
Washington, DC 20036

Committee on Careers
National League for Nursing
10 Columbus Circle
New York, NY 10019

Council on Social Work Education
345 East 46th Street
New York, NY 10017

Guidance Materials Department
Science Research Associates, Inc.
259 East Erie Street
Chicago, IL 60611

Health Careers Council of Illinois
410 N. Michigan Avenue
Chicago, IL 60612

Illinois Association for the Mentally Retarded
Ridgely Building
504 East Monroe
Springfield, IL 62701

Illinois College of Podiatric Medicine
1001 N. Dearborn Street
Chicago, IL 60610

Illinois Dental Laboratory Association
550 Frontage Road
Northfield, IL 60093

Illinois Hospital Association
840 North Lake Shore Drive
Chicago, IL 60611

Illinois State Veterinary Medical Association
Publications Department
921 North Lake Street
Aurora, IL 60406

National Association of Hearing and Speech
Agencies
919 18th Street, NW
Washington, DC 20006

National Association of Human Services
Technologies
1127-11th Street, Main Floor
Sacramento, California 95814

National Association of Mental
Health
10 Columbus Circle
New York, NY 10019

National Association for Mental
Health, Inc.
1800 North Kent Street
Arlington, VA 22209

National Association for Practical
Nurse Education and Service, Inc.
1465 Broadway
New York, NY 10036

National Association for Retarded
Citizens
P.O. Box 6109
2709 Avenue E East
Arlington, TX 76011

National Association of Social
Workers
Medical Social Work Section
One Park Avenue
New York, NY 10016

National Council for Homemaker-
Home Health Aide Service, Inv.
67 Irving Place, 6th Floor
New York, NY 10003

National Dental Hygiene Association
934 Shoreham Building
Washington, DC 20005

National Federation of Licensed
Practical Nurses, Inc.
250 West 57th Street
New York, NY 10019

National Health Council, Inc.
1740 Broadway
New York, NY 10019

National Society for the Prevention
of Blindness
79 Madison Avenue
New York, NY 10016

Occupational Therapy Department
Rehabilitation Institute of Chicago
345 E. Superior Street
Chicago, IL 60611

Office of Information
Bureau of Health Manpower Education
National Institute of Health
Bethesda, MD 20014

Registry of Medical Technologists
701 South Wolcott Street
Chicago, IL 60612

State of Illinois, Department of
Mental Health
401 State Office Building
Springfield, IL 62706

State of Illinois, Department of Public
Health
535 West Jefferson
Springfield, IL 62706

State of Illinois, Department of
Public Health
Bureau of Health Education Film Library
525 West Jefferson St.
Springfield, IL 62706

The American Orthoptic Council
555 University Avenue
Toronto, Canada M5G 1X8

The American Orthotic and Prosthetic
Association
1440 N. Street NW
Washington, D.C. 20005

The American Registry of Radiologic
Technologists
2600 Wayzata Boulevard
Minneapolis, MI 55405

The American Society of Radiologic
Technologist
500 N. Michigan Avenue, Suite 836
Chicago, IL 60611

United States Department of Health,
Education and Welfare
Public Health Service
National Institute of Health
National Library of Medicine
Audio-Visual Center
Atlanta, GA 30333

United States Department of Labor
Employment Security
Washington, DC 20213

U.S. Public Health Service
Communicable Disease Center
605 Volunteer Building
Atlanta, GA 30333

University of Illinois
College of Pharmacy
833 South Wood
Chicago, IL 60612

CE 008 636